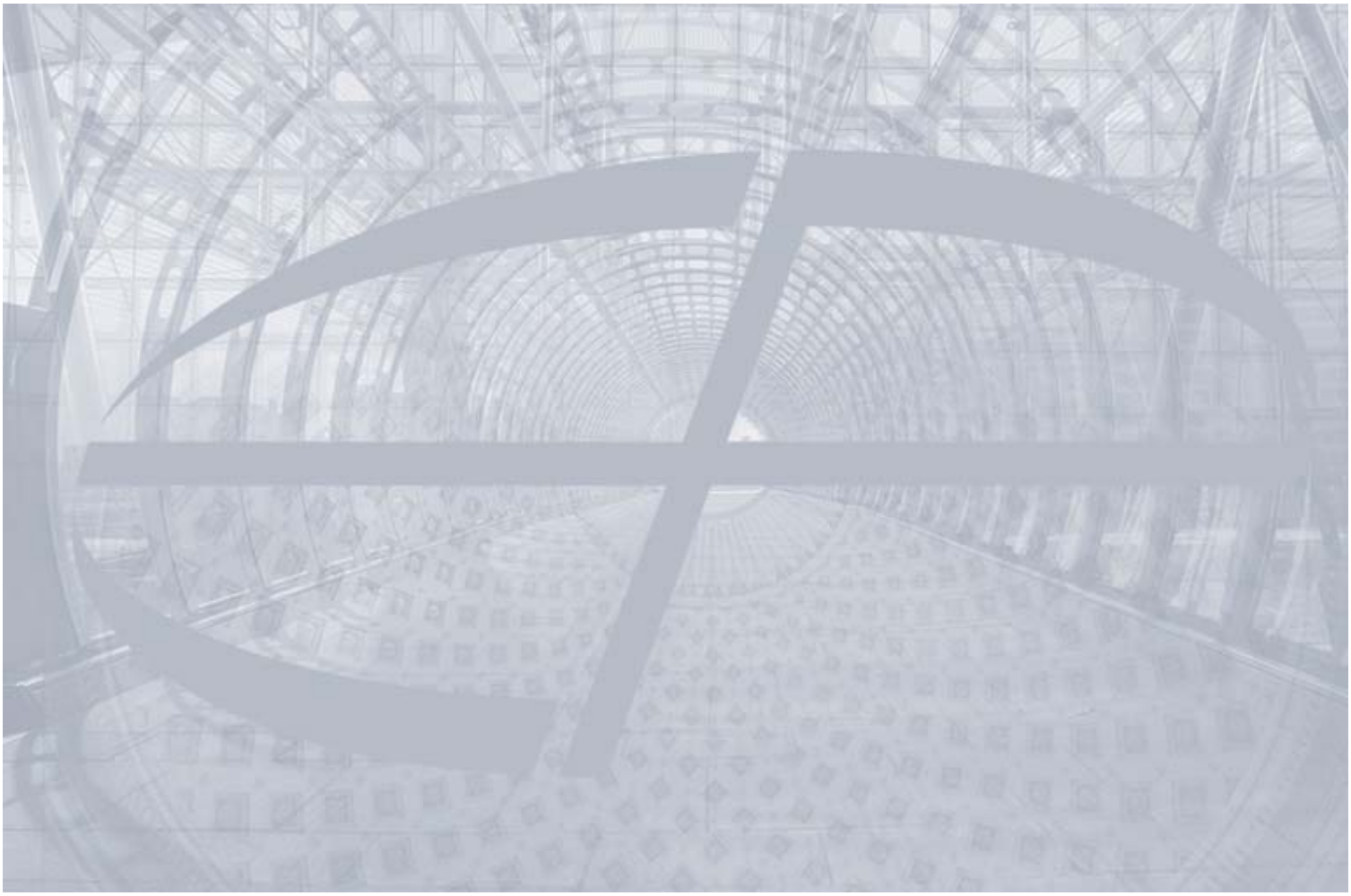
EVANS & PECK



## Queensland Competition Authority

# SEQ Interim Price Monitoring

Date 5 January 2011

# Table of Contents

# 1 PROJECT BACKGROUND

The Premier and the Treasurer have referred the monopoly distribution, retail and wastewater activities of three water utilities in South East Queensland to the Queensland Competition Authority (QCA) for a price monitoring investigation covering the period from 1 July 2010 to 30 June, 2013.

Evans & Peck have been appointed to provide input to work being undertaken by Martin Lally to assist on deriving the Weighted Average Cost of Capital (WACC) for these regulated water utilities; namely Queensland Urban Utilities, Allconnex Water and Unitywater (the Entities).

Specifically Evans & Peck have been asked by QCA to assist with providing pricing for interest rate swaps (IRS) and Credit Default Swaps (CDS) to determine the efficient benchmark cost of debt for these entities, aligned to the regulatory price reset period for each, based on their probable commercial debt funding behaviour in the market.

Evans & Peck will also provide some feedback on, and justification of, some of the inputs and outputs from the exercise and liaise with Martin Lally to provide consistency with his work.

# 2 METHODOLOGY AND SUMMARY OF INPUTS

QCA have determined that typically these Entities fund themselves on the debt side with an average of 10 year fixed rate bonds. However the regulatory periods for resetting pricing will be either 1, 3, or 5 years. QCA have to adjust the two components of any cost of debt, the risk free rate and the debt premium, to the shorter periods for the purposes of WACC modelling. The risk free rate can be adjusted on the basis of interest rate swap pricing, and the debt premium can be adjusted on the basis of CDS pricing.

**A. Basic information:**

1. Enterprise Value: The entities' regulatory asset bases (RABs)

| RAB | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|
| | 1-Jul-10 | 1-Jul-11 | 1-Jul-12 | 1-Jul-13 |
| | $'000 | $'000 | $'000 | $'000 |
| **QUU** | 4,187,000 | 4,260,000 | 4,557,000 | 4,934,000 |
| **Allconnex Water** | 4,087,000 | 4,464,000 | 4,884,000 | 5,081,000 |
| **Unitywater** | 2,381,000 | 2,644,000 | 2,885,000 | 3,093,000 |

These RAB's are based on the entities' submissions and can be assumed to be indexed at inflation into the future after 2013. Importantly the enterprise value used is equated to the RAB. The gearing used is 60%. That allows the underlying amount of the debt of each entity, both now and into the future, to be derived. This will in turn give the underlying nominal principal amount of the debt for swap pricing.

2. The credit rating is assumed to be BBB, and then BBB+ as a sensitivity.
3. As explained below, the IRS and CDS are to be hypothetically transacted on 10, 5, 3 and 1 year tenors.
4. The swaps are to be priced as if transacted on 1 July, 2010; and as a sensitivity as on 3 June, 2010.

**B. Mechanism:**

Dealing with the interest rate swaps:

1. For each hypothetical swap, the execution and risk spreads can be derived. The swap is assumed to be to BBSW. The swap spreads will not be further adjusted for the timing of any difference payments (calendar quarters, monthly etc);
2. For the principal profile derived above, the swap from 10 year fixed to 10 year floating can be derived –as well as the spread breakdown for each Entity;
3. The execution spread is an estimate of the buffer that a bank levies for fluctuations in the market while the back to back transactions are placed. The risk spread is an estimate of the charge that a bank makes for the risk of the counterparties (the three Entities we are dealing with) of defaulting – most likely for non payment;
4. Then the swaps from floating into 5, 3, and 1 year fixed can be derived –and for each, the spread breakdown.

Dealing with the CDS:
In theory we also need to price CDS for the 1,3,5 and 10 year periods for the above entities, as described above. There have been some comments that beyond 5 years the market may not be liquid enough to effectively price CDS. As a first stage exercise Evans & Peck:

1. Determined whether the swaps could be replicated
2. Provided an explanation of the conclusions

**C. Basis for swap rate derivation and spreads:**

The fixed rates in the table below are based on the Australian dollar interest swap rates as reported by Bloomberg (Bloomberg reference SWAM) and published by the Australian Financial Markets Association (AFMA). The rates shown in the table below are taken at 10am for the dates requested of 3 June 2010 and 1 July 2010.

The rates are mid-market (BBSW). An increase of 5bps will need to be applied to convert to the bid rate (BBSY bid). This adjustment is needed if the margins quoted on the debt are margins to BBSY bid which is common, but not needed if the margins are to BBSW.

The credit spreads are based upon the requested ratings (BBB+ and BBB), specified tenors (1, 3, 5 and 10 years) and an internal bank Credit Valuation Adjustment (CVA) model. Execution spreads are based on current market pricing and an internal bank pricing model.

# 3 SPECIFIC ISSUES CONSIDERED

Questions were asked during the process about the impact of swap volumes on pricing, the ability to derive CDS pricing to enable the derivation of the debt premium and the impact of transacting the two legs of the swap at the same time:

1. The difference in theoretical swap volumes that each of the Entities would be seeking to place in the market is unlikely to cause notable differences in execution/liquidity spreads between the three entities. It is important to note that if the Entities were to actually place their swaps in the market then they would most likely seek to place the swaps in tranches which would not shift the market. Advice is that the sizes of the swap tranches would also most likely be determined by the debt tranche sizes (rather than swap volumes) as the debt is more likely to suffer liquidity and pricing tension issues than the swap transactions. This assumption of tranching the swaps has been tested with QCA and agreed. Therefore no difference in pricing is noted between the three Entities.

2. The Australian CDS market is relatively illiquid post 5 years and probably does not correctly price risk. We are also advised that the CDS pricing tends to be less than the cash (i.e. traded bonds) market and understates the true cost of debt for a BBB/BBB+ counterparty.

3. We are advised that there is little material difference in the pricing of the two stage swap process being considered, as between transacting them independently and transacting them sequentially or commensurately.

# 4 SUMMARY OF RESULTS

The table below gives a summary of results. Points to note are:

i) The pricing has been carried out for both BBB and BBB+;

ii) Prices have been given for two transaction dates. The market differentiates on the fixed rates but not the spreads, indicating a stable market over that period;

iii) The pricing of a swap from fixed to floating is virtually (but not exactly) the same as for the reverse swap – but within the limits of this exercise the difference is not material. Thus only one set of pricing has been given for any swap, be that fixed to floating or floating to fixed;

iv) The fixed rate is swapped into floating (BBSW (mid)) rate debt and the spreads are those that would be charged relevant to this rate. An increase of 5bps would be required if the bid rate (BBSY bid) applied, which has not been included in the below table.

v) The pricing for the two stage swaps can be derived by adding the spreads for the first swap to those of the second. For example, the cost of swapping 10 year fixed BBB rated debt to 3 year debt = (0.070 + 0.055) + (0.030 + 0.019) = 0.174

| 03 Jun 2010 | 1 Year | | 3 Year | | 5 Year | | 10 Year | |
|---|---|---|---|---|---|---|---|---|
| | BBB | BBB+ | BBB | BBB+ | BBB | BBB+ | BBB | BBB+ |
| Execution Spread (%) | 0.020 | 0.020 | 0.030 | 0.030 | 0.050 | 0.050 | 0.070 | 0.070 |
| Risk Spread (%) | 0.003 | 0.003 | 0.019 | 0.015 | 0.032 | 0.025 | 0.055 | 0.045 |

| 01 Jul 2010 | 1 Year | | 3 Year | | 5 Year | | 10 Year | |
|---|---|---|---|---|---|---|---|---|
| | BBB | BBB+ | BBB | BBB+ | BBB | BBB+ | BBB | BBB+ |
| Execution Spread | 0.020 | 0.020 | 0.030 | 0.030 | 0.050 | 0.050 | 0.070 | 0.070 |
| Risk Spread | 0.003 | 0.003 | 0.019 | 0.015 | 0.032 | 0.025 | 0.055 | 0.045 |

# 5 DISCLOSURE STATEMENT

The QCA acknowledges Evans and Peck has no liability for market based information which it provides under its agreement with QCA except where Evans and Peck is otherwise in breach of that agreement. Evans and Pecks acknowledges that it is required to act professionally in providing such information.

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