FACT SHEET

New Approach to Estimating the Cost of Debt: Use of the RBA's Corporate Credit Spreads

February 2014

From 1 July 2014, we propose to apply a new approach to estimating the cost of debt. Our proposed approach is based on credit spreads[1] for Australian non-financial corporations (NFCs) published by the Reserve Bank of Australia (RBA).[2] This Fact Sheet provides stakeholders with detailed information and an opportunity to comment on our proposed changes.

1 Background

On 19 December 2013, the RBA published a method for estimating aggregate credit spreads of Australian non-financial corporations (NFCs) across maturities ranging from 1 to 10 years.[3] The Bank also announced that it would commence publishing the estimated credit spreads monthly from December 2013. In our final report on the Review of WACC Methodology, which we released prior to the RBA releasing its aggregated credit spreads, we indicated our preference for adopting the RBA's series of credit spreads in our WACC estimation.[4]

1 The RBA uses the term, 'credit spreads'. We and other regulators use the term, 'debt margin'. The 2 terms are synonymous.

2 http://www.rba.gov.au/statistics/tables/index.html

3 Arsov, I., Brooks, M., and M. Kosev, *New measures of Australian corporate credit spreads,* Reserve Bank of Australia, December 2013.

4 IPART, *Review of WACC methodology – Final Report,* December 2013, p 14.

2 Analysis

2.1 Our current approach to estimating the cost of debt

As part of our final decision on the Review of WACC Methodology, we increased the target term-to-maturity (TTM) assumption for our cost of debt estimate from 5 years to 10 years for all industries regulated by us. Consequently, we replaced the 5-year Bloomberg Fair Value (BFV) curve and the 5-year risk-free rate with the 7-year BFV curve[5] and 10-year risk-free rate in estimating debt margins.

To arrive at our cost of debt estimate, we calculate 2 debt margin estimates – one using current market data (hereafter current debt margin) and the other using long-term averages (hereafter long-term debt margin).[6] In particular:

- For the current debt margin, we use a sample of Australian corporate bonds issued in Australia and the US, and the 7-year BBB BFV curve. We first calculate the 40-day average of the daily debt margins for each bond in the sample. We then use the interquartile range and the median of the 40-day averages as our debt margin range and midpoint. This is used to calculate the WACC using current market data (hereafter current WACC).
- For the long-term debt margin, we use the daily yields on the 7-year BBB BFV curve averaged over 10 years. This is used to calculate the WACC using long-term averages (hereafter long-term WACC).

While this methodology produces accurate estimates of debt margins, moving to the 10-year TTM requires methodological changes, because:

- Our current methodology allows us to estimate a debt margin with a maturity of around 5 years consistent with our previous target TTM of 5 years.
- Bloomberg does not issue a fair value curve with a 10-year TTM. The longest available BFV curve has a maturity of 7 years.

5 We use the 7-year BFV due to the unavailability of a BFV curve with a maturity of 10 years.

6 To calculate the cost of debt, the debt margin is added to the nominal risk-free rate. We then add an allowance of 12.5 basis points for debt raising costs to the cost of debt.

2.2 Comparison of the IPART and RBA methodologies

Comparison of IPART's and the RBA's bond samples

Table 2.1 summarises the main differences between our and the RBA's methodology. Both consider Australian corporate bonds only. However, the RBA's sample includes more bonds as it includes Eurodollar bonds and bonds with embedded options[7], and only requires a year of remaining TTM, although it restricts the sample to bonds issued by NFCs raising the equivalent of at least A$100 million.

Table 2.1 Comparison of bond samples

	IPART	RBA
Number of bonds in sample[a]	34	59
Target credit rating	BBB+ to BBB	BBB
Minimum residual TTM	2 years	1 year
Currency denomination	AUD and US	AUD, US and EUR
Minimum denomination value	No	A$100 million
Types of bonds	Fixed rate	Fixed rate
Includes bonds with embedded options	No	Yes
Includes bonds issued by financial corporations	Yes	No
Weighted for residual TTM	No	Yes

a As of 10 February 2013.

Source: Ivailo Arsov, Matthew Brooks and Mitch Kosev, New Measures of Australian Corporate Credit Spreads, RBA Bulletin December Quarter 2013, December 2013.

Advantages and disadvantages of the RBA's corporate credit spreads

The main advantage of the RBA's methodology is that its bond sample achieves an average tenor close to our target of 10 years by:

1. including in the sample bonds with embedded options which tend to be issued with longer maturities, and
2. assigning a greater weight to a bond with a remaining maturity closer to 10 years in calculating credit spreads.

We consider that this is an improvement over our current methodology.

In addition, using the RBA's series would further increase transparency of our WACC determination process as data we use to calculate debt margins will be readily available through the RBA's website.

7 For bonds with embedded options, optionality affects the underlying value of the bond and, in turn, its yield and swap spread. Hence the RBA uses option adjusted spread (OAS) which measures the spread that is not attributable to the value of the option. Refer to Arsov et al. (2013) for more details.

Table 2.2 summarises disadvantages of using the RBA's corporate credit spreads and our responses to them. Overall, we consider that the benefits of having a publicly available debt margin series published by a reliable and respected source outweigh the disadvantages listed in the table below.

Table 2.2 Possible issues of using the RBA's data and our responses

Possible issues	Our responses
▼ The RBA's corporate credit spread is available monthly, so we cannot calculate a 40-day average to estimate the current WACC.	▼ We will average the RBA's credit spreads over 2 months, which approximately correspond to 40 trading days. The RBA releases data at the beginning of each month for the estimate of the previous month. We will take the last 2 observations available prior to a WACC decision.
▼ The RBA's corporate credit spread is available from January 2005. As at February 2014, we can only calculate a 9-year average debt margin for the long-term WACC.	▼ This is a minor issue. Within less than a year, we will be able to calculate a 10-year average.
▼ The RBA aggregates BBB+, BBB and BBB ratings to a single category of BBB. Adopting the RBA methodology would mean that we may have to change our target credit rating in the WACC from BBB+/BBB to an aggregate of BBB+, BBB and BBB-.	▼ We do not consider this to have a material effect on the debt margin.
▼ The current debt margin based on the RBA data will be a point estimate, not a range.	▼ Our default position is to estimate the WACC based on 50% current market data and 50% long-term averages. Switching to a point estimate debt margin will have a limited effect on the overall cost of debt, since the long-term debt margin is already a point estimate in our current methodology.

Comparison of debt margins, cost of debt and WACCs

Table 2.3 shows the debt margins, cost of debt estimates and WACCs for water industry based on our and the RBA's data. Note that the estimates are based on a 10-year TTM.

Table 2.3 Debt margin, cost of debt and WACC for water industry

	IPART	RBA
Debt margin	2.1%	3.1%
Cost of debt	6.7%	7.8%
Post-tax real WACC midpoint	4.8 %	5.5%
Post-tax real WACC range	4.4-5.2%	5.4-5.5%

Note: As at 10 February 2014.

Source: Bloomberg, Reserve Bank of Australia and IPART analysis.

Table 2.3 shows that switching to using the RBA's data to estimate the debt margin increases the WACC for water industry by 70 basis points due to an increase in the debt margin. The debt margin estimated by the RBA is higher than ours for 2 main reasons. Firstly, the RBA's bond sample has a longer maturity by including bonds with embedded options and applying the weighting scheme based on bonds' residual TTMs. Our sample has an overall tenor of around 5 years, while the RBA's has an overall tenor of 8.6 years as at January 2014. Since the yield of long-term bond is higher than that of short-term bond of the same credit quality, the RBA's sample produces a higher debt margin.

Secondly, the inclusion of bonds with a BBB- rating in the RBA's sample results in a higher debt margin. In setting the WACC, we currently target a BBB+ to BBB credit rating, and hence our sample includes bonds with a BBB+ or BBB credit rating. In comparison, the RBA estimates corporate credit spreads for a single category of BBB which combines bonds with a BBB+, BBB or BBB- rating.

3 Where to from here?

We propose to start using the RBA data to estimate debt margins for reviews starting from 1 July 2014.

We invite our stakeholders to contact us directly if you have any questions regarding this proposed change by Friday 4 April 2014. If there is sufficient interest, we will consider holding a workshop with interested stakeholders before 1 July 2014.

Inquiries regarding this fact sheet should be directed to:

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