

# FACT SHEET

## WACC Biannual Update

August 2015

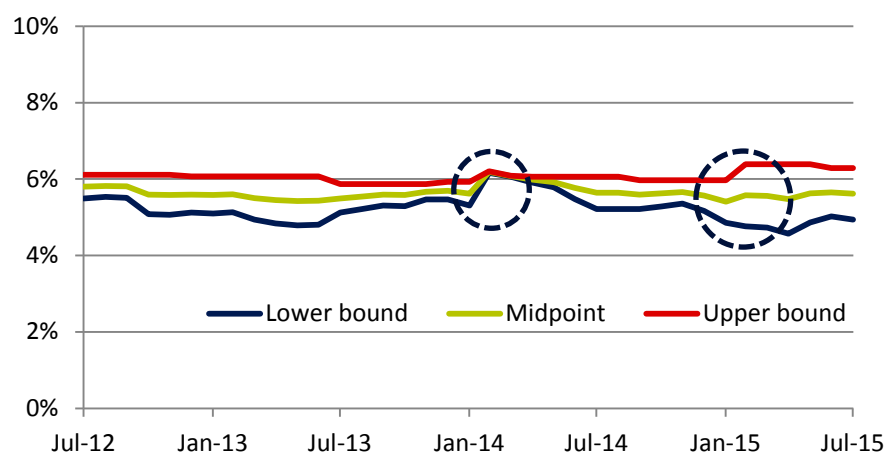
We publish a biannual market update to help our stakeholders replicate and predict our WACC decisions. We release market updates biannually in February and August each year. This update incorporates market data to 31 July 2015.

We also publish a spreadsheet containing a working copy of our full WACC model. The model contains market data sampled to 31 July 2015.

### 1 Overview

Using the market equity beta of 1 and a gearing ratio of 60%, the real post-tax WACC estimates over the last three years are as presented in Figure 1. Table 1 and Table 2 show the current values of the underlying market parameters and the WACC range.

**Figure 1 Real post-tax WACC range and mid-points from July 2012 to July 2015**



**Note:** In April 2014 we started using credit spreads published by the Reserve Bank of Australia instead of Australian corporate bonds yields provided by Bloomberg. Also, in early 2015, we changed our approach in forecasting inflation adjustment for converting nominal post-tax WACC into real post-tax WACC. The effect of these decisions is highlighted.

**Table 1 Market-based parameters as of 31 July 2015**

	Risk free rate	Debt margin	Market risk premium <sup>a</sup>	Inflation adjustment
40-day average	2.9%	2.4%	7.9%	2.4%
10-year average	4.7%	2.9%	6.0%	2.4%
Mid-point	3.8%	2.7%	7.0%	2.4%

<sup>a</sup> Mid-point estimate.

**Table 2 WACC range as of 31 July 2015**

	Lower	Mid-point	Upper
Nominal post-tax	7.5%	8.2%	8.8%
Real post-tax	5.0%	5.6%	6.3%

Over the last six months, the 40-day average of the 10-year Commonwealth Government bonds (proxy of the risk free rate) has increased by 20 basis points to 2.9% at the end of July 2015. The short term debt margin has gone up by 10 basis points to 2.4%. However, the short term market risk premium (MRP) has trended down by 60 basis points.

In March 2015, we changed our approach to estimating the inflation adjustment.<sup>1</sup> The effect of this decision is that the mid-point of the inflation adjustment we use to convert the nominal WACC to a real WACC has decreased by 30 basis points since our February 2015 update. A lower inflation adjustment results in a higher WACC. Had we used our previous methodology to estimate the inflation adjustment, the mid-point real post-tax WACC (Table 2) would have been 5.3%.

As shown in Figure 1, the mid-point WACC (real post-tax) has increased from 5.4% to 5.6% over the six months to July 2015.

Our calculation of the WACC values can be found in the accompanying [spreadsheet](#).<sup>2</sup>

## 2 Analysis

### WACC analysis for the industries (water and transport) we regulate

IPART conducts price reviews for regulated water and transport businesses. Table 3 shows the industry specific parameters we typically adopt for these industries.

1 IPART, *New Approach to forecasting the WACC inflation adjustment – Fact Sheet*, December 2014 and March 2015.

2 Select an industry from the drop-down menu in the accompanying spreadsheet for industry-specific WACC estimates.

**Table 3 Industry specific WACC parameters**

Sector	Beta			Target term-to-maturity	Gearing ratio
	Low	Mid	High		
<b>Water<sup>a</sup></b>	0.6	0.7	0.8	10 years	60%
<b>Transport<sup>b</sup></b>	0.8	0.9	1.0	10 years	60%

<sup>a</sup> For the water industry, we determine a WACC for Essential Energy, Gosford City Council, Hunter Water Corporation, Sydney Desalination Plant, Sydney Water Corporation, WaterNSW (formerly State Water Corporation and Sydney Catchment Authority) and Wyong Shire Council.

<sup>b</sup> For the transport industry, we determine a WACC for Sydney Trains, Sydney Ferries, the private ferries and metropolitan and outer metropolitan buses.

Each time we review prices of the regulated businesses, we consider the appropriate valuation for each parameter. In some cases, we depart from these standard industry parameter valuations after taking account of the individual regulated business's circumstances.

For example, in our decisions for the water industry, we typically adopt a gearing level of 60%. However, in the previous [determination](#) for Essential Energy's water business, we determined that a gearing level ranging from 50% to 60% was appropriate for this particular decision. Similarly, in our previous [determination](#) for Sydney Ferries, we determined that a gearing level ranging from 40% to 60% was appropriate.

Using the industry specific WACC parameters set out in Table 3, the WACC range and mid-points for the industries we regulate over the period from July 2013 to July 2015 are presented in Table 4.

**Table 4 Real post-tax WACC mid-points and ranges from July 2013 to July 2015**

	Jul-13	Jan-14	Jul-14	Jan-15	Jul-15
<b>Water</b>					
Upper bound	5.2%	5.2%	5.4%	5.3%	5.6%
Mid-point	4.7%	4.8%	4.8%	4.5%	4.8%
Lower bound	4.2%	4.4%	4.3%	3.8%	4.1%
<b>Transport</b>					
Upper bound	5.6%	5.7%	5.8%	5.7%	6.1%
Mid-point	5.2%	5.3%	5.4%	5.1%	5.4%
Lower bound	4.8%	5.0%	4.9%	4.4%	4.7%

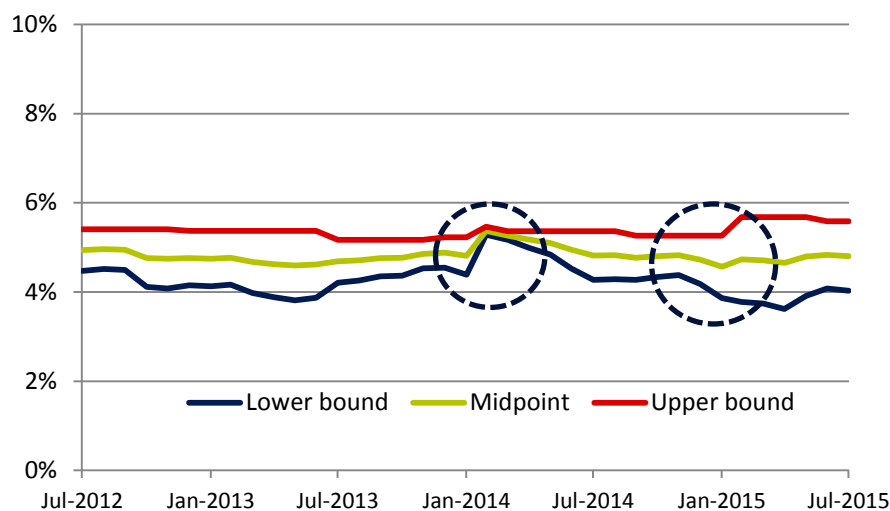
**Note:** Commencing March 2015, we adopt a new approach in forecasting the WACC inflation adjustment (please see footnote 3).

The increase in the industry WACC values in the six months to July 2015 is mainly due to the change of our approach in forecasting the WACC inflation adjustment that we use to convert the nominal post-tax WACC into real post-tax WACC.<sup>3</sup>

In the six months to July 2015, the 10-year average of the WACC parameters was generally stable. However, the 40-day average of the risk free rate (proxied by the 10-year Commonwealth Government bond yields) and debt margin increased slightly by 20 and 10 basis points respectively compared with January 2015. The 40-day average of the market risk premium (MRP) fluctuated between a narrow band of 7.9% to 8.4%.

Figures 2 and 3 present the regulated industries' WACC mid-points and ranges from July 2012 to July 2015.

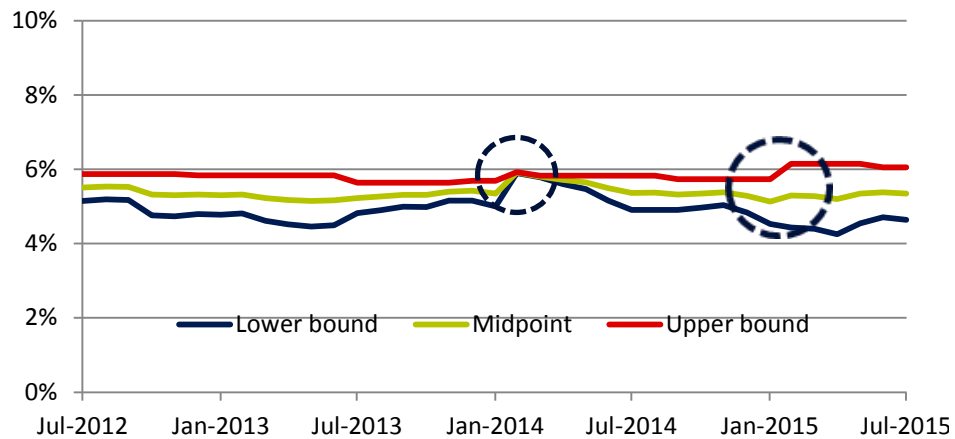
**Figure 2 Water WACC mid-points and ranges (July 2012 to July 2015)**



**Note:** In April 2014 we started using credit spreads published by the Reserve Bank of Australia instead of Australian corporate bonds yields provided by Bloomberg. Also, in early 2015, we changed our approach in forecasting inflation adjustment for converting nominal post-tax WACC into real post-tax WACC. The effect of these decisions is highlighted.

3 IPART, *New Approach to forecasting the WACC inflation adjustment – Fact Sheet*, December 2014 and March 2015.

**Figure 3 Transport WACC mid-points and ranges (July 2012 to July 2015)**



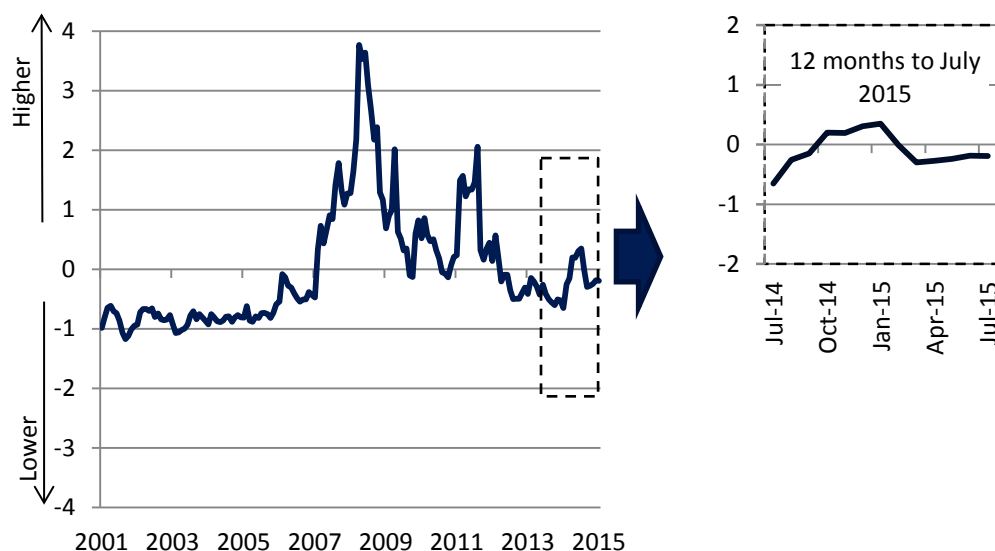
**Note:** In April 2014 we started using credit spreads published by the Reserve Bank of Australia instead of Australian corporate bonds yields provided by Bloomberg. Also, in early 2015, we changed our approach in forecasting inflation adjustment for converting nominal post-tax WACC into real post-tax WACC. The effect of these decisions is highlighted.

### Financial market uncertainty index

Our 2013 [Final Report](#) on the WACC methodology sets out our methodology for calculating the uncertainty index.<sup>4</sup> We have updated the uncertainty index to the end of July 2015 and as shown in Figure 4, the uncertainty index is currently within one standard deviation of the long term average value of zero. According to our WACC decision rule, we would use the mid-point WACC to estimate the return on capital invested by the regulated businesses.

<sup>4</sup> See IPART, *Review of WACC Methodology – Final Report*, December 2013 for more details.

**Figure 4 Financial market volatility index**



#### Additional market information

**Table 5 Additional financial market and economic information**

	Cost of Debt	Cost of Equity
Market data	Stable	Stable
Analyst and consultant reports	Stable	Stable

#### Market data

- ▼ Mergers and acquisitions (M&A) in the first quarter of 2015 increased by 88% from the same period last year to \$37.1 billion. The increase in the value of the M&A in Australia is part of a global bull market for takeovers.<sup>5</sup> On the other hand, IPO activities have been subdued, raising a total of just \$20.4 million initial capital over the six months to July 2015.<sup>6</sup>
- ▼ Generally, the first half of 2015 saw a slowdown in the corporate bond market. The slowdown was consistent with the key debt markets across Asia therefore it was more of a regional trend rather than just a domestic development. However, the market improved in the second quarter of 2015 with increased loan volume and size of transactions.<sup>7</sup>

5 <http://www.ansarada.com/news/australia-part-of-global-bull-market-for-mergers-and-acquisitions> accessed on 7 August 2015.

6 <http://www.asx.com.au/about/market-statistics.htm> Accessed on 7 August 2015.

7 KPMG, *Debt Market Update*, Q1 and Q2, 2015.

- ▼ The Australian corporate bond spreads at the aggregate BBB rating have increased slightly over the last six months. The RBA's measure of 10-year BBB-rated debt indicates a margin of around 238 basis points over the 10-year Commonwealth Government bonds in July 2015 compared with 206 basis points in January 2015.<sup>8</sup>
- ▼ Over the same period, the 10-year Commonwealth Government bond yields (proxy of risk free rate) rose by nearly 30 basis points from 2.6% to 2.9%.<sup>9</sup>
- ▼ However, the 90-day bank bill rates fell by 56 basis points over the six months to July 2015. It fell 35 basis points upon the RBA's [decision](#) to reduce interest rates in February this year and pulled back another 21 basis points by July 2015.<sup>10</sup>
- ▼ Table 6 shows that recent loan transactions have a tenor of three to five years with a margin of 150 to 260 basis points over the swap rates.

**Table 6 Loan transactions and spreads 6 months to 31 July 2015**

Borrower	Date of issue	Tranche Amount (\$m)	Tenor (years)	Margin (bps)
Whitehaven Coal	Jun 2015	800	4	250
Whitehaven Coal	Jun 2015	400	4	250
TPG Telecom	Apr 2015	2,000	3	260
NSW Ports	Apr 2015	125	3	150
NSW Ports	Apr 2015	400	3	150
NSW Ports	Apr 2015	400	5	150

**Note:** Margins are expressed over the swap rate.

**Source:** KPMG, *Debt Market Update*, Q2, 2015.

### Analyst and consultant reports

- ▼ We have reviewed recent equity analyst and consultant reports for their cost of capital assumptions:
  - In assessing APA Group (APA.AU) in June 2015, Deutsche Equity Research has used a WACC of 7.0% (nominal post-tax), risk free rate of 2.9% and an implied MRP of 6.5%.<sup>11</sup>
  - In a valuation of another energy utility Energy Developments (ENE.AU) the equity analysts have used a WACC of 9.5% (nominal post-tax), equity beta of 0.85 and an implied MRP of 6.0%.<sup>12</sup>

<sup>8</sup> RBA Statistical Table, *Aggregate Measures of Australian Corporate Bond Spreads and Yields - F3 - Non-financial corporate BBB-rated bonds - Spread to CGS - 10 year* accessed on 7 August 2015.

<sup>9</sup> RBA statistical table F2.1 Capital Market Yields - Government Bonds.

<sup>10</sup> Thomson Reuters Datastream, accessed on 6 August 2015.

<sup>11</sup> Deutsche Bank Markets Research, *QCLNG pipeline transaction closes*, 4 June 2015.

<sup>12</sup> Deutsche Bank Markets Research, *DUET takeover offer*, 23 July 2015.