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Determination of cost of capital to apply for information disclosure in respect of gas distribution services supplied by Powerco Limited [2012] NZCC 31

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Executive summary

1. This determination specifies a weighted average cost of capital (WACC) midpoint estimate and range to apply for information disclosure year 2013 for gas distribution services supplied by Powerco Limited (Powerco's GDB).

2. The midpoint estimate of vanilla[1] WACC for information disclosure year 2013 is 6.83%, with a range from 6.02% to 7.64%.

3. The midpoint estimate of post-tax[2] WACC for information disclosure year 2013 is 6.12%, with a range from 5.31% to 6.93%.

[1] The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity.
[2] The post-tax WACC is a weighted average of the post-corporate tax cost of debt and the cost of equity.

Introduction

4. This determination specifies a WACC midpoint estimate and range to apply in respect of Powerco's GDB for information disclosure in the 12 months from 1 October 2012 to 30 September 2013 (the 2013 disclosure year). Powerco has a disclosure year ending September, while other regulated gas distribution businesses have June year ends for information disclosure.[3] WACCs for the 2013 information disclosure year for those businesses were set in July 2012.[4]

5. The WACC estimates are set pursuant to Clauses 2.4.1 to 2.4.7 of the Gas Distribution Services Input Methodologies Determination 2012 (the GDS IM Determination).[5]

6. The Commission has determined a midpoint estimate of both vanilla and post-tax WACCs. The vanilla WACC is a weighted average of the pre-corporate tax cost of debt and the cost of equity. The post-tax WACC is a weighted average of the post-corporate tax cost of debt and the cost of equity.

7. The parameter values, estimates and information sources used to estimate WACC are set out in this determination. Additional commentary on the estimation of the risk-free rate and the debt premium is also provided.

8. For example, this determination identifies the issuers and bonds that were analysed (including the credit rating and remaining term to maturity) when estimating the debt premium. The commentary also explains which debt premium estimates were given greater weight than other estimates.

Background

Changes in the risk-free rate and debt premium over time

9. The cost of capital input methodologies for the regulated services reflect that both the risk-free rate[6] and the debt premium on bonds[7] change over time.

10. Changes in the risk-free rate and debt premium on bonds are illustrated below. Figure 1 shows the changes over time in:

    10.1 the five year risk-free rate; and

    10.2 the debt premium on bonds rated BBB+ with a term of five years.

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3 Commerce Commission, *Gas Distribution Information Disclosure Determination* [2012], NZCC 23. See the definition of disclosure year, page 11.

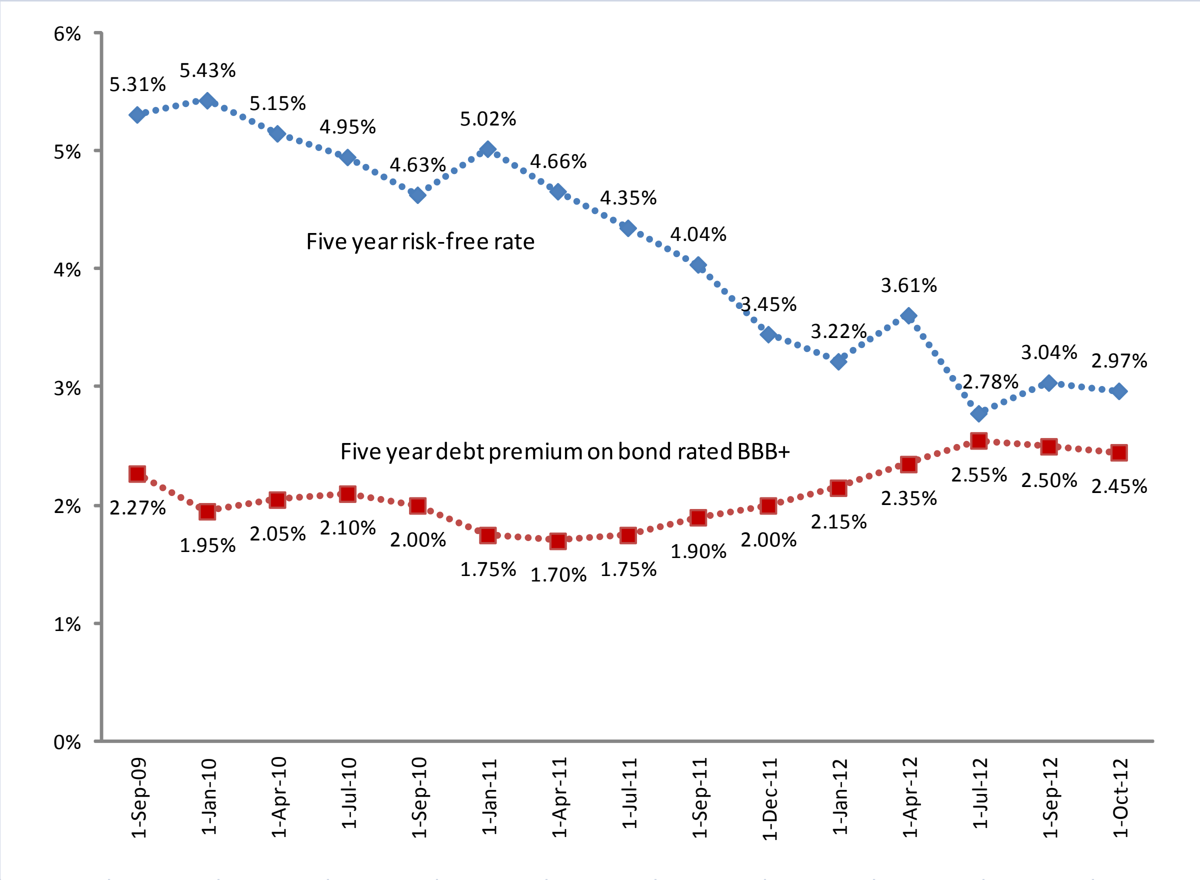
4 Commerce Commission, *Cost of capital determination for information disclosure year 2013 for Transpower, gas pipeline businesses and specified airport services (with a June year-end)* [2012] NZCC 20.

5 Commerce Commission, *Gas Distribution Services Input Methodologies Determination* [2012] NZCC 27.

6 The risk-free rate is estimated based on an interpolation of bid yields on New Zealand government stock to a term to maturity of five years.

7 The debt premium is estimated on publicly traded corporate bonds according to the methodology specified in the GDS IM Determination.

Figure 1: Changes in the five year risk-free rate and debt premium over time



Reasons for differences in WACC under the various cost of capital input methodologies determinations

11. Differences in the WACCs estimated under the various cost of capital input methodologies reflect differences in:

    11.1 the date of estimation for the WACCs, which results in different estimates of the risk-free rate and debt premium;

    11.2 the periods in which the WACCs will apply;

    11.3 the context in which the WACCs will be used (75th percentile estimates of the WACC are used when considering default and customised price-quality paths, while a midpoint and range is determined for information disclosure);

    11.4 the assessed risk of the various regulated services (electricity distribution businesses (EDBs) and Transpower have an asset beta of 0.34, gas pipeline businesses (GPBs) have an asset beta of 0.44 and Airports have an asset beta of 0.60); and

    11.5 the value of leverage for airports (17%) and for EDBs, GPBs, and Transpower (44%).

WACC for Powerco's GDB ID

12. Under clause 2.4.1 of the GDS IM Determination, the Commission has determined:

    12.1 A mid-point estimate of vanilla WACC of 6.83% for the five year period commencing on the first day of disclosure year 2013 (ie 1 October 2012); and

    12.2 A mid-point estimate of post-tax WACC of 6.12% for the five year period commencing on the first day of disclosure year 2013 (ie 1 October 2012).

13. Under clause 2.4.7 of the GDS IM Determination, the Commission has also determined:

    13.1 a vanilla WACC range from 6.02% to 7.64%, for the 2013 disclosure year. where the endpoints are the 25th and 75th percentile estimates respectively; and

    13.2 a post-tax WACC range from 5.31% to 6.93%, for the 2013 disclosure year, where the endpoints are the 25th and 75th percentile estimates respectively.

Parameters used to estimate the WACC

14. These estimates of WACC reflect the parameters specified in the GDS IM Determination and estimates of the risk-free rate and debt premium in accordance with the GDS IM Determination.

Summary of parameters

15. The parameters used to estimate the WACCs are summarised in Table 1 below.

Table 1: Parameters used to calculate WACC for Powerco's GDB ID

Risk-free rate (5 years)	2.97%	Debt premium (5 years)	2.45%
Equity beta	0.79	TAMRP	7.0%
Average corporate tax rate	28%	Average investor tax rate	28%
Debt issuance costs (5 years)	0.35%	Leverage	44%
Standard error of debt premium	0.0015	Standard error of WACC	0.012
Cost of debt (5 year)	5.77%	Cost of equity (5 years)	7.67%
Vanilla WACC (5 year, midpoint)	5.77% x 0.44 + 7.67% x (1-0.44) = 6.83%		
Post-tax WACC (5 year, midpoint)	5.77% x 0.44 x (1-0.28) + 7.67% x (1-0.44) = 6.12%		

Risk-free rate

16. The risk-free rate reflects the linearly-interpolated, annualised, bid yield to maturity on New Zealand government bonds with a term to maturity of five years. The estimates use data reported by Bloomberg for the month of September 2012 in respect of the April 2015 and December 2017 maturity bonds. The April 2015 and December 2017 bonds have simple average annualised bid yields to maturity of 2.60% and 3.00% respectively.

17. The daily data reported by Bloomberg is annualised (to reflect the 6 monthly payment of interest), averaged to give a monthly average, and linearly interpolated to produce the estimate of a 2.97% interest rate on a NZ government bond with a five year term to maturity as at 1 October 2012.

Tax rates

18. The average corporate tax rate is the corporate tax rate of 28% for all years. The average investor tax rate is the investor tax rate of 28% for all years.

Standard error of the WACC

19. The standard error of the WACC is determined in accordance with the formula in the GDS IM Determination, and is shown to three decimal places only in Table 1 above.

Debt premium

20. The methodology for determining the debt premium is set out in clause 2.4.4 of the GDS IM Determination.

21. Clause 2.4.4(3)(d) requires the Commission to estimate the debt premium that would reasonably be expected to apply to a vanilla NZ$ denominated bond that:

    21.1 is issued by a GPB or an EDB that is neither majority owned by the Crown nor a local authority;

    21.2 is publicly traded;

    21.3 has a qualifying rating of grade BBB+; and

    21.4 has a remaining term to maturity of five years.

22. In estimating the debt premium, clause 2.4.4(4) of the GDS IM Determination provides that the Commission will have regard to:

    22.1 bonds issued by a GPB or an EDB (that is neither majority owned by the Crown nor a local authority) with a rating of BBB+;

    22.2 bonds issued by another entity (that is neither majority owned by the Crown nor a local authority) with a rating of BBB+;

    22.3 bonds issued by a GPB or an EDB (that is neither majority owned by the Crown nor a local authority) with a rating other than BBB+;

22.4 bonds issued by another entity (that is neither majority owned by the Crown nor a local authority) with a rating other than BBB+; and

22.5 bonds issued by government-owned entities.

23. Clause 2.4.4(5)(a) provides that progressively lesser regard will ordinarily be given to the debt premium estimates in the order that the bonds are identified in clauses 2.4.4(4)(a) to (e).

24. The table below show the debt premium determined by the Commission as at 1 October 2012. This table include a summary of information on the investment grade rated bonds the Commission considered in determining the debt premium.

25. A spreadsheet showing the calculations for the debt premium and the risk-free rate is published on our website.[8]

[8] See www.comcom.govt.nz/cost-of-capital

Table 2: Five-year debt premium on a GDB/EPB-issued bond rated BBB+[9]

Determined debt premium on an EDB/GPB-issued bond rated BBB+ with a remaining term of 5 years as at 1 October 2012

	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
Determined Debt Premium	*EDB / GPB*	*BBB+*	*5.0*	*2.45*	*Vector premium provides floor. Regard to results of 4(c) and 4(d). Not inconsistent with 4(e).*

Subclause	Issuer	Industry	Rating	Remaining Term to Maturity	Debt premium	Comment
4(a)	Vector[1]	EDB/GPB	BBB+	2.0	1.77	Minimum per subclause 5(b).
4(b)						No data on applicable bond.
4(c)	Powerco[2]	EDB/GPB	BBB	5.0	2.49	BBB+ debt premium would be less than this.
4(d)	Contact[3]	Other	BBB	4.5	2.50	5 year debt premium would be higher and a BBB+ debt premium would be less than this.
	AIAL[4]	Other	A-	5.0	1.88	BBB+ debt premium would be higher than this.
	Telecom[5]	Other	A-	3.5	2.03	5 year debt premium and BBB+ debt premium would be higher than this.
	Telstra[6]	Other	A	4.8	2.06	5 year debt premium and BBB+ debt premium would be higher than this.
	Fonterra[7]	Other	A+	3.4	1.56	5 year debt premium and BBB+ debt premium would be higher than this.
4(e)	Genesis[8]	Other	BBB+	5.0	1.88	
	MRP[9]	Other	BBB+	5.0	2.06	
	Transpower[10]	Other	AA-	5.0	1.45	
	Meridian[11]	Other	BBB+	4.5	2.11	

Notes on bonds analysed:

1 Vector 7.8% bond maturing 15/10/2014.
2 Powerco 6.74% bond maturing 28/09/2017.
3 Contact Energy 7.855% bond maturing 13/04/2017.
4 AIAL 8% bond maturing 15/11/2016; 5.47% bond maturing 17/10/2017.
5 Telecom 7.04% bond maturing 22/03/2016.
6 Telstra 7.515% bond maturing 11/07/2017.
7 Fonterra 6.83% bond maturing 04/03/2016.
8 Genesis 7.185% bond maturing 15/09/2016; 8.3% bond maturing 23/06/2020.
9 Mighty River Power 7.55% bond maturing 12/10/2016; 8.21% bond maturing 11/02/2020.
10 Transpower 6.595% bond maturing 15/02/2017; 7.19% maturing 12/11/2019.
11 Meridian 7.55% bond maturing 16/03/2017.

26. Consistent with clauses 2.4.4(4) and 2.4.4(5)(a) of the GDS IM Determination, greatest regard has been given to the estimated debt premium on Vector's October 2014 bond. This bond is issued by a GPB/EDB, is publicly traded and has a rating of BBB+. However, the October 2014 Vector bond has a remaining term to maturity of 2 years, which is significantly less than five years specified in clause 2.4.4(3)(d).

27. As at 1 October 2012, the debt premium on the Vector bond was estimated at 1.77%. Consistent with clause 2.4.4(5)(b), this estimated debt premium is treated as the minimum debt premium for a bond rated BBB+ with a term of five years.

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9 The five-year debt premiums on the Auckland International Airport Limited (AIAL), Genesis, Mighty River Power (MRP) and Transpower bonds are calculated by linear interpolation with respect to maturity.

28. The five year debt premium on Powerco's bond is 2.49%. Powerco's bond is rated BBB, implying that the five year debt premium on bonds rated BBB+ would be less than 2.49%.

29. The Commission has also had regard to the estimated debt premium on bonds from a range of other issuers including Auckland International Airport Limited (AIAL) (1.88%, 5 years, rated A-), Contact Energy (2.50%, 4.5 years, rated BBB), Telecom (2.03%, 3.5 years, rated A-), Telstra (2.06%, 4.8 years, rated A) and Fonterra (1.56%, 3.4 years, rated A+). Consistent with clause 2.4.4(5)(a) these were given less weight as the issuers are not GPBs or EDBs, and the debt issues had different credit ratings than the BBB+ rating specified in clause 2.4.4(3)(d).

30. The estimated debt premium on the Genesis bonds (rated BBB+ with a 5 year term to maturity), the Mighty River Power bonds (rated BBB+ with a 5 year term to maturity), the Transpower bonds (rated AA- with a 5 year term to maturity) and the Meridian bond (rated BBB+ with a 4.5 year term to maturity) were 1.88%, 2.06%, 1.45% and 2.11% respectively.

31. Starting with the estimated debt premium on the Vector bond, but having regard to the debt premium on a range of other bonds, the Commission has determined the debt premium on a publicly traded, GPB/EDB-issued bond, rated BBB+ with a remaining term of five years to be 2.45% as at 1 October 2012.