

Cost of capital determination for disclosure year 2020 for information disclosure regulation

Electricity distribution businesses and Wellington International Airport

[2019] NZCC 7

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Associated documents

Publication date	Reference	Title
20 December 2016	ISSN 1178-2560	Airport Services Input Methodologies Determination 2010 (Consolidated December 2016)
20 December 2016	ISBN 978-1-869455-48-4	Input methodologies review decisions (Topic paper 4: Cost of capital issues)
3 April 2018	ISSN 1178-2560	Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018)
30 April 2018	ISSN 1178-2560	Guidelines for WACC determinations under the cost of capital input methodologies – Regulation under Part 4 of the Commerce Act 1986
30 April 2018	ISSN 1178-2560	Cost of capital determination for disclosure year 2019. Electricity distribution businesses and Wellington International Airport [2018] NZCC 7
31 July 2018	ISSN 1178-2560	Cost of capital determination for disclosure year 2019 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2018] NZCC 11

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WACC estimates for disclosure year 2020 for EDBs and Wellington Airport

1. This determination specifies weighted average cost of capital (WACC) estimates that will apply for disclosure year 2020 for electricity distribution businesses (EDBs) and Wellington International Airport (Wellington Airport) for information disclosure regulation.
2. Vanilla and post-tax WACC estimates for disclosure year 2020 for EDBs and Wellington Airport are summarised in Table 1 and Table 2 below, respectively.

Table 1: Summary of vanilla and post-tax WACC estimates for EDBs (%)

	Vanilla WACC	Post-tax WACC
Mid-point	4.69	4.27
25 th percentile	4.01	3.59
67 th percentile	5.13	4.71
75 th percentile	5.37	4.95

Table 2: Summary of vanilla and post-tax WACC estimates for Wellington Airport (%)

	Vanilla WACC	Post-tax WACC
Mid-point	5.84	5.67
Standard error	0.0146	0.0146

3. Further detail regarding the parameter values used to generate these WACC estimates is contained in paragraphs 5 to 15 below. The WACC estimates have been calculated as at 1 April 2019, which is the first day of disclosure year 2020.
4. This determination should be read together with our guidelines for WACC determinations under the cost of capital input methodologies.¹ These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:
 - 4.1 the formulas used;
 - 4.2 the values for WACC parameters which are fixed under the input methodologies; and
 - 4.3 our methodology for determining the risk-free rate and average debt premium.

¹ Commerce Commission “Guidelines for WACC determinations under the cost of capital input methodologies – Regulation under Part 4 of the Commerce Act 1986” (30 April 2018). Available online: https://comcom.govt.nz/__data/assets/pdf_file/0021/91191/Guidelines-for-WACC-determinations-under-the-cost-of-capital-input-methodologies-30-April-2018.pdf

Further details regarding the WACC estimates

WACC parameter values

5. The parameter values used to generate the mid-point WACC estimates for disclosure year 2020 for EDBs and Wellington Airport are summarised in Table 3 below.

Table 3: Values used to calculate WACC estimates for EDBs and Wellington Airport

Parameter	EDBs	Wellington Airport
Risk-free rate	1.77%	1.77%
Average debt premium	1.63%	1.24%
Leverage	42%	19%
Equity beta	0.60	0.74
Tax adjusted market risk premium	7.0%	7.0%
Average corporate tax rate	28%	28%
Average investor tax rate	28%	28%
Debt issuance costs	0.20%	0.20%
Cost of debt*	3.61%	3.21%
Cost of equity	5.48%	6.46%
Standard error of midpoint WACC estimate	0.0101	0.0146
Mid-point vanilla WACC	4.69%	5.84%
Mid-point post-tax WACC	4.27%	5.67%

*The numbers are rounded to two decimal points.

Risk-free rate for both EDBs and Wellington Airport

6. 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. Our estimate of the risk-free rate is based on data reported by Bloomberg for the three month period ending March 2019 in respect of the April 2023 and April 2025 maturity bonds.
7. The daily data reported by Bloomberg is linearly interpolated, annualised (to reflect the six monthly payment of interest), and averaged to produce the estimate of a 1.77% interest rate on New Zealand government bonds with a five year term maturity, as estimated at 1 April 2019.

Average debt premium for EDBs

8. The average debt premium for EDBs of 1.63% is the average of the debt premium values for the current debt premium reference year (DPRY) and the four previous

DPRYs, as shown in Table 4 below. DPRY 2019 is the current reference year for EDBs.²

Table 4: Average debt premium for EDBs (%)

	DPRY 2015	DPRY 2016	DPRY 2017	DPRY 2018	DPRY 2019	Average
Debt premium	1.76	1.59	1.59	1.63	1.60	1.63

9. The debt premium values for the 2015 to 2017 DPRYs are set out in clause 2.4.4(4) of the Electricity Distribution Services Input Methodologies Determination 2012 (EDB IM). The debt premium value for the 2018 DPRY estimate was set out in the WACC determination for the 2019 EDB disclosure year.³
10. We have estimated the debt premium for EDB DPRY 2019 of 1.60%, based on judgement informed by the data in Table 5 below.
 - 10.1 We have had greatest regard to the category (b) bonds⁴, which support a debt premium of approximately 1.50% to 1.71% as there are no applicable category (a) bonds. The Genesis (1.71%), Mercury (1.65%), Meridian (1.50%) and Wellington Airport (1.58%) bonds both match the target credit rating (BBB+) and remaining term to maturity (5 years).
 - 10.2 The estimated debt premiums on other issuers in categories (c) to (e)⁵ are generally consistent with a debt premium in the range from 1.50% to 1.71%, when consideration is given to different credit ratings and terms to maturity. The Nelson-Siegel-Svensson estimate of the debt premium of 1.60% also supports a debt premium in this range.
 - 10.3 We have determined a debt premium of 1.60% for DPRY 2019, which is within the range from 1.50% to 1.71% and is also supported by The Nelson-Siegel-Svensson estimate of the debt premium.

² The 'current debt premium reference year' refers to the debt premium reference year that contains the start of the relevant disclosure year. EDB disclosure year 2020 starts on 1 April 2019. In this case, the current debt premium reference year is DPRY 2019 (1 September 2018 to 31 August 2019).

³ Cost of capital determination for disclosure year 2019. Electricity distribution businesses and Wellington International Airport [2018] NZCC 7. Available online: https://comcom.govt.nz/__data/assets/pdf_file/0027/91188/2018-NZCC-7-Cost-of-capital-determination-EDBs-and-Airports-WIAL-ID-30-April-2018.PDF

⁴ Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clause 2.4.4(7)(b).

⁵ Electricity Distribution Services Input Methodologies Determination 2012 (Consolidated April 2018), ISSN 1178-2560, Clauses 2.4.4(7)(c) to (e).

Table 5: Debt premium estimate for EDB DPRY 2019

	Industry	Rating	Remaining term to maturity	Debt premium
Determined debt premium	EDB/GPB	BBB+	5.0	1.60

Category	Issuer	Note ref.	Industry	Rating	Remaining term to maturity	Debt premium	Comment
(a)	-	-	-	-	-	-	No data applicable bonds
(b)	GENESIS ENERGY LTD	1	Other	BBB+	5.0	1.71	Credit rating and term are an exact match
	MERCURY NZ LTD	2	Other	BBB+	5.0	1.65	Credit rating and term are an exact match
	MERIDIAN ENERGY LIMITE	3	Other	BBB+	5.0	1.50	Credit rating and term are an exact match
	WELLINGTON INTL AIRPOR	4	Airport	BBB+	5.0	1.58	Credit rating and term are an exact match
(c)	VECTOR LTD	5	EDB/GPB	BBB	6.0	1.93	BBB+ debt premium would be lower; 5 year debt premium would be lower
(d)	AUCKLAND INTL AIRPORT	6	Airport	A-	5.0	1.12	BBB+ debt premium would be higher
	CHORUS LTD	7	Other	BBB	3.2	1.57	BBB+ debt premium would be lower; 5 year debt premium would be higher
	CONTACT ENERGY LTD	8	Other	BBB	4.7	1.44	BBB+ debt premium would be lower; 5 year debt premium would be higher
	FONTERRA COOPERATIVE G	9	Other	A-	5.0	1.28	BBB+ debt premium would be higher
	SPARK FINANCE LTD	10	Other	A-	5.0	1.24	BBB+ debt premium would be higher
(e)	CHRISTCHURCH INTL AIRP	11	Airport	A-	5.0	1.54	BBB+ debt premium would be higher
	TRANSPOWER NEW ZEALAND	12	Other	AA-	5.0	1.06	BBB+ debt premium would be higher
Nelson-Siegel Svensson estimate					5.0	1.60	

Notes on bonds analysed

- 1 GENEPO 5.81 03/08/23; GENEPO 4.14 03/18/22; GENEPO 5 04/03/25
- 2 MCYNZ 5.793 03/06/23
- 3 MERINZ 4.53 03/14/23
- 4 WIANZ 5.27 06/11/20; WIANZ 5 06/16/25
- 5 VCTNZ 4.996 03/14/24
- 6 AIANZ 3.64 04/17/23; AIANZ 4.28 11/09/22; AIANZ 5.52 05/28/21; AIANZ 3.97 11/02/23
- 7 CNUNZ 4.12 05/06/21
- 8 CENNZ 4.63 11/15/22
- 9 FCGNZ 4.42 03/07/23; FCGNZ 5.9 02/25/22; FCGNZ 5.08 06/19/25
- 10 SPKNZ 4.51 03/10/23; SPKNZ 4 1/2 03/25/22; SPKNZ 3.94 09/07/26
- 11 CHRINT 6 1/4 10/04/21; CHRINT 5.53 04/05/27
- 12 TPNZ 5.448 03/15/23; TPNZ 4.069 09/16/22; TPNZ 4.3 06/30/22; TPNZ 3.823 03/06/25

Average debt premium for Wellington Airport

11. The average debt premium for Wellington Airport of 1.24% is the average of the debt premium values for the current DPRY and the four previous DPRYs, as shown in Table 6 below. DPRY 2019 is the current reference year for Wellington Airport.⁶
12. The debt premium values for the 2015 to 2017 DPRYs are set out in clause 5.4(4) of the Airport Services Input Methodologies Determination. The debt premium for airports' DPRY 2018 and 2019 was determined in July 2017 and 2018, respectively.⁷

⁶ Wellington Airport's disclosure year 2020 starts on 1 April 2019. In this case, the current debt premium reference year is DPRY 2019 (1 July 2018 to 30 June 2019).

⁷ Cost of capital determination for disclosure year 2019 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2018] NZCC 11 (31 July 2018), Table 8, p 9; Cost of capital determination for disclosure year 2018 for Transpower, gas pipeline businesses and suppliers of specified airport services (with a June year-end) [2017] NZCC 7 (31 July 2017), Table 9, p 26.

Table 6: Average debt premium for Wellington Airport (%)

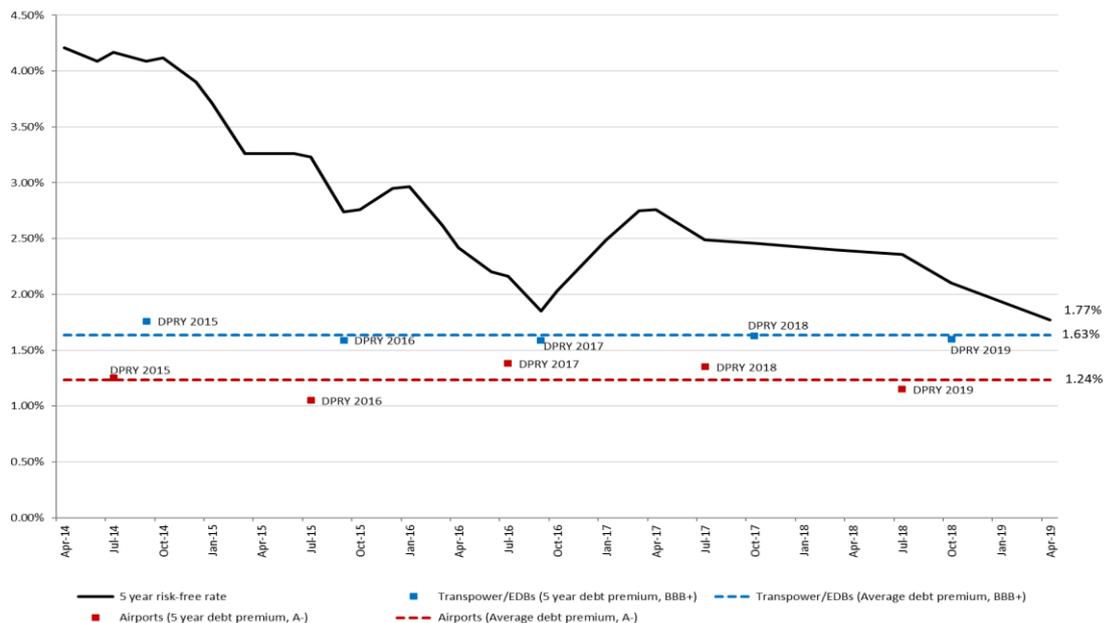
	DPRY 2015	DPRY 2016	DPRY 2017	DPRY 2018	DPRY 2019	Average
Debt premium	1.25	1.05	1.38	1.35	1.15	1.24

WACC range and 67th percentile estimate for EDBs

13. In addition to the mid-point estimate, we are also required to determine a WACC range and 67th percentile estimate for each EDB disclosure year.
14. The WACC range means the values falling between the 25th percentile and 75th percentile, inclusive of the mid-point estimate of WACC. The methodology for estimating different WACC percentile estimates is set out in clause 2.4.5 of the EDB IM.⁸

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

15. The cost of capital input methodologies for regulated services (including for EDBs and Wellington Airport) reflect that both the risk-free rate and the debt premium on bonds change over time. Figure 1 shows, as at 1 April 2019, changes over time in the:
- 15.1 five year risk-free rate;
 - 15.2 debt premium on bonds rated BBB+ with a term of five years;
 - 15.3 debt premium on bonds rated A- with a term of five years.

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

⁸ The same methodology applies to both vanilla and post-tax WACC estimates. The mid-point estimate of WACC is treated as the 50th percentile.