

Cost of capital determination for disclosure year 2024 for information disclosure regulation

For Chorus Limited

[2024] NZCC 1

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Associated documents

Publication date	Reference	Title
1 August 2023	ISSN 1178-2560	Cost of capital determination for disclosure year 2024 for information disclosure regulation – For Enable Networks Limited [2023] NZCC 19
28 June 2023	ISSN 1178-2560	Fibre Input Methodologies Amendment Determination 2023 [2023] NZCC 13
1 May 2023	ISSN 1178-2560	Cost of capital determination for disclosure year 2024 for information disclosure regulation, For Tuatahi First Fibre Limited and Northpower Fibre Limited [2023] NZCC 9
1 February 2023	ISSN 1178-2560	Cost of capital determination disclosure year 2023 for information disclosure regulation, For Chorus Limited [2023] NZCC 1
17 January 2023	ISBN 978-1-869457-90-7	Guidelines for WACC determinations under the cost of capital input methodologies - Regulation under Part 4 of the Commerce Act 1986 and Part 6 of the Telecommunications Act 2001
3 May 2022	ISSN 1178-2560	Cost of capital determination for Tuatahi First Fibre Limited and Northpower Fibre Limited ID [2022] NZCC 13
1 February 2022	ISSN 1178-2560	Cost of capital determination for Chorus, Enable, Tuatahi, and Northpower Fibre ID [2022] NZCC 1
30 November 2021	ISSN 1178-2560	Fibre Information Disclosure Determination 2021 (consolidated July 2022)
1 July 2021	ISSN 1178-2560	Cost of capital determination for Chorus' price quality path for PQP1 [2021] NZCC 8

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WACC estimates for disclosure year 2024 for Chorus

1. This cost of capital determination has been made under the Cost of Capital Input Methodologies (IMs).¹
2. This determination specifies the weighted average cost of capital (WACC) estimates that will apply for information disclosure (ID) regulation for disclosure year 2024 for Chorus Limited (Chorus).
3. The timing of our WACC determinations for Fibre ID regulation differs depending on the disclosure year of the regulated companies.² We determine an ID WACC for Chorus in January or February each year as its disclosure year is 1 January to 31 December, with disclosure year 2024 being the year ending 31 December 2024.^{3, 4}
4. The vanilla and post-tax WACC estimates for disclosure year 2024 for Chorus are summarised in Table 1 below.

Table 1: Vanilla and post-tax WACC estimates

	Mid-point
Vanilla WACC	8.32%
Post-tax WACC	7.77%
Standard error	0.0131

5. The WACC estimates have been calculated as at 1 January 2024, which is the first day of disclosure year 2024 for Chorus.
6. This determination should be read in conjunction with our guidelines for estimating the WACC under the IMs.⁵ These guidelines form part of this determination. The guidelines explain our methodology for calculating WACC estimates, including:

¹ Fibre Input Methodologies Determination 2020, [2020] NZCC 21 (as amended). An unofficial consolidated version incorporating amendments to the determination as of 21 December 2021 is [available on the Commerce Commission website](#).

² Fibre Input Methodologies Determination 2020 (consolidated December 2021).

³ The input methodologies require us to make the determinations for all regulated fibre service providers other than Chorus within one month of the start of the disclosure year for all disclosure years except for disclosure year 2022. The input methodologies require us to make the determinations for Chorus within two months of the start of the disclosure year.

⁴ We determine an ID WACC for Tuatahi First Fibre Limited (Tuatahi) and Northpower Fibre Limited (Northpower Fibre) in April each year as their disclosure years are 1 April to 31 March. We determine an ID WACC for Enable Networks Limited in July, as its disclosure year is 1 July to 30 June.

⁵ Commerce Commission, [Guidelines for WACC determinations under the cost of capital input methodologies](#) (17 January 2023).

- 6.1 the formulas used;
- 6.2 the values for WACC parameters which are fixed under the IMs; and
- 6.3 our methodology for determining the risk-free rate and average debt premium.

Further details regarding the WACC estimates

WACC parameter values for Chorus

- 7. The parameter values used to generate the mid-point WACC estimates for Chorus are summarised in Table 2 below.⁶

Table 2: Values used to calculate WACC estimates

Parameter	Estimate
Risk-free rate	5.09%
Average debt premium ⁷	1.45%
Leverage	29%
Asset beta	0.50
Equity beta	0.70
Tax-adjusted market risk premium	7.5%
Average corporate tax rate	28%
Average investor tax rate	28%
Debt issuance costs	0.33%
Cost of debt	6.87%
Cost of equity	8.92%
Standard error of mid-point WACC estimate	0.0131
Mid-point vanilla WACC	8.32%
Mid-point post-tax WACC	7.77%

*The numbers are rounded to two decimal points, except for the tax-adjusted market risk premium and standard error of the mid-point WACC estimate.

⁶ All parameter values except the asset beta, estimate of the risk-free rate and the average debt premium are specified in the Fibre IMs. It should be noted, however, that the equity beta is calculated using the values of the asset beta and leverage, so this value of the asset beta is implicitly defined in the Fibre IMs. See Commerce Commission, [Fibre input methodologies: Main final decisions – reasons paper](#) (13 October 2020), para 6.411.

⁷ Based on a Standard & Poor's target credit rating of BBB.

Risk-free rate

8. The risk-free rate reflects the estimated bid yield to maturity on New Zealand government bonds with a term to maturity equal to the length of the regulatory period (three years).⁸
9. Our estimate of the three-year risk-free rate is based on data reported by Bloomberg for the three-month period ending 31 December 2023 in respect of the May 2026 and April 2027 maturity bonds.
10. The daily data reported by Bloomberg is linearly interpolated, annualised (to reflect the six-monthly or quarterly payment of interest) and averaged to produce the estimate of a 5.09% interest rate on New Zealand government bonds with a three-year term to maturity, as estimated at 1 January 2024.⁹

Average debt premium

11. The average debt premium of 1.45% 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 3 below. DPRY 2024 is the current debt premium reference year.

Table 3: Average debt premium for Chorus (%)

	DPRY 2020	DPRY 2021	DPRY 2022	DPRY 2023	DPRY 2024	Average
Debt premium	1.70	1.70	1.30	1.15	1.40	1.45

12. The DPRYs for all regulated fibre service providers start on 1 September and end on 31 August.¹⁰ DPRY 2024 (the DPRY ending 31 August 2024), is the current DPRY for Chorus as it contains the start of disclosure year 2024 (1 January 2024). The Fibre IMs state that the calculation of the debt premium for a DPRY is estimated for each business day in the 12 months preceding the start of the DPRY. This means that for all the DPRYs we have used bond data starting on 1 September and ending on 31 August.
13. We estimated the debt premiums for DPRYs 2020 to 2023 in previous WACC determinations. The debt premium values for DPRYs 2020 to 2021 were estimated in

⁸ We interpolate between the two closest bonds surrounding a three-year remaining term. This requires taking the yields of the bonds with a remaining term immediately before and after a three-year term to maturity on that day. The target term to maturity is constant but the bonds' remaining terms to maturity decrease over time, so the bonds immediately before and after the target term may change over time.

⁹ Note that the target term to maturity for the risk-free rate and debt premium are different for the first regulatory period (the risk-free rate has a term equal to the length of the regulatory period, ie, three years for the first regulatory period, and the debt premium has a five-year term). For more information see the cost of debt section of the Fibre IM final reasons paper: Commerce Commission "Fibre input methodologies: Main final decisions – Reasons paper", 13 October 2020, paras 6.81 to 6.264.

¹⁰ Commerce Commission, Fibre Input Methodologies Determination 2020 (consolidated December 2021).

the WACC determination for Chorus Limited's first PQ path in July 2021. The debt premium value for DPRY 2022 was estimated in the ID WACC determination published on 1 February 2022 applying to Chorus, Enable, Tuatahi and Northpower Fibre.¹¹ The debt premium value for DPRY 2023 was estimated in the ID WACC determination published on 1 February 2023 applying to Chorus.¹²

14. When determining the WACC estimates for Chorus' first price-quality path, we estimated the historical debt premium estimates to calculate the five-year historical average. A summary of the data used and how we have applied our judgement in determining the debt premiums for DPRYs 2020 to DPRY 2021 are described in the Cost of capital determination for Chorus' first price-quality path.¹³
15. We have estimated a debt premium of 1.40% for DPRY 2024, based on the data in Table 4 below.¹⁴
 - 15.1 We have had greatest regard to the category (a) and (c) bonds, which support a debt premium of approximately 1.40%. The Chorus bond debt premium estimate (1.35%) matches the target credit rating (BBB). However, the remaining term to maturity is slightly less than five years, so we would expect the five-year debt premium to be slightly higher. Although the Contact Energy bond with a slightly longer term to maturity (1.37%) may support a slightly lower debt premium, and the Wellington Airport (1.61%) bond with a shorter term to maturity may support a higher debt premium, we have given less regard to these bonds as they do not match the target sector.
 - 15.2 The estimated debt premiums for other issuers in bond categories (e) to (f) are not inconsistent with a debt premium around 1.40%, when consideration is given to the different credit ratings and terms to maturity.
 - 15.3 The Nelson-Siegel-Svensson (NSS) debt premium estimate of 1.40% is consistent with our estimate of 1.40%

¹¹ Commerce Commission, Cost of capital determination for Chorus' price quality path for PQP1, NZCC 8 [2021], 1 July 2021 and Commerce Commission, Cost of capital determination for Chorus, Enable, Tuatahi, and Northpower Fibre ID [2022] NZCC 1, 1 February 2022.

¹² Commerce Commission, Cost of capital determination disclosure year 2023 for information disclosure regulation, For Chorus Limited [2023] NZCC 1, 1 February 2023.

¹³ Commerce Commission, Cost of capital determination for Chorus' price quality path for PQP1, NZCC 8 [2021], 1 July 2021, paras 17-18.

¹⁴ Note that bond observations that have a remaining term to maturity exactly equal to the target (ie, five years), and include multiple bonds analysed, have been interpolated between multiple bonds from the issuer to give an exact match to the target term to maturity.

Table 4: Debt premium estimate for Chorus DPROY24

Bond category	Issuer	Sector	100% Govt owned	Bond credit rating	Remaining term to maturity (years)	Debt premium	Comments
a	Chorus Limited	Fibre	No	BBB	4.70	1.35	5 year debt premium would be higher.
c	Contact Energy Limited	Other	No	BBB	5.10	1.37	5 year debt premium would be lower.
c	Wellington International Airport Limited	Airport	No	BBB	3.40	1.61	5 year debt premium would be higher.
e	Auckland International Airport Limited	Airport	No	A-	5.10	1.13	BBB debt premium would be higher; 5 year debt premium would be lower.
e	Fonterra Co-operative Group Limited	Other	No	A-	2.70	1.08	BBB debt premium would be higher; 5 year debt premium would be higher.
e	Genesis Energy Limited	Other	No	BBB+	5.00	1.40	BBB debt premium would be higher.
e	Mercury NZ Limited	Other	No	BBB+	5.00	1.37	BBB debt premium would be higher.
e	Meridian Energy Limited	Other	No	BBB+	2.30	1.13	BBB debt premium would be higher; 5 year debt premium would be higher.
e	Spark Finance Limited	Telco	No	A-	5.00	1.09	BBB debt premium would be higher.
e	Vector Limited	EDB/GPB	No	BBB+	4.70	1.39	BBB debt premium would be higher; 5 year debt premium would be higher.
f	Christchurch International Airport Limited	Airport	Yes	A-	5.20	1.32	BBB debt premium would be higher; 5 year debt premium would be lower.
f	Transpower New Zealand Limited	Other	Yes	AA	5.00	0.78	BBB debt premium would be higher.

Notes on bonds analysed	
1	CNUNZ 1.98 12/02/27
2	CENNZ 5.82 04/11/28
3	WIANZ 2 1/2 08/14/26
4	AIANZ 5.67 05/09/28
5	FCGNZ 4.15 11/14/25
6	GENEPO 4.17 03/14/28; GENEPO 5 04/03/25; GENEPO 3.65 12/20/28
7	MCYNZ 1.56 09/14/27; MCYNZ 2.16 09/29/26; MCYNZ 1.917 10/09/30
8	MERINZ 4.21 06/27/25
9	SPKNZ 3.94 09/07/26; SPKNZ 4.37 09/29/28
10	VCTNZ 3.69 11/26/27
11	CHRINT 5.18 05/19/28
12	TPNZ 5.893 03/15/28

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

16. The risk-free rate and the debt premium on bonds change over time. Changes in the risk-free rate and debt premium estimates are illustrated below. Figure 1 shows, as at 1 January 2024, changes over time in the:
- 16.1 five-year risk-free rate from our historical determinations in other regulated sectors;
 - 16.2 three-year risk-free rate; and
 - 16.3 debt premiums and five-year average debt premiums on bonds rated BBB with a term of five years from our historical debt premium determinations.

Figure 1: Changes in the five-year debt premiums and three-year and five-year risk-free rates over time

