APPENDIX A: CHORUS' PROPOSED AMENDMENTS TO THE FURTHER IM DETERMINATION

This table outlines Chorus' suggested changes to the Commission's further draft IM Determination (of 13 August 2020). It includes issues we have identified that do not reflect our preferred position as well as issues where we consider that the Commission's drafting is not workable. We propose alternative drafting where relevant in red. We note that this drafting is shown as against the Commission's latest draft IMs except where we have already proposed drafting changes, in which case the drafting takes into account our earlier proposed amendments. The proposed changes do not reflect all our submission points. We intend this table to be of assistance for the more straightforward changes proposed.

Reference in Further Consultation Paper	Issue	Proposed change to the IM Determination (13 August 2020)
PART 1		
1.1.4 50th percentile estimate of WACC	Replace the 50th percentile definitions with definitions for the 67th percentile consistent with clause 3.5.5	1.1.4 Interpretation **50th percentile estimate of WACC** means for the purpose of (a) Part 2, the 50th percentile estimate of post-tax **WACC**, determined in accordance with clause 2.4.5(1); (b) Part 2, the 50th percentile estimate of vanilla **WACC**, determined in accordance with clause 2.4.5(1); ~~(c) Part 3, the 50th percentile estimate of post-tax **WACC**, determined in accordance with clause 3.4.5(2);~~ ~~(d) Part 3, the 50th percentile estimate of vanilla **WACC**, determined in accordance with clause 3.4.5(1);~~ **67th percentile estimate of WACC** means for the purpose of (a) Part 3, the 67th percentile estimate of post-tax **WACC**, determined in accordance with clause 3.5.5(2); (b) Part 3, the 67th percentile estimate of vanilla **WACC**, determined in accordance with clause 3.5.5(1);
1.1.4 Capital Contribution	As noted in our submission on the Revised IMs (23 Jul 2020), the NSI fund was established to provide free installations for non-standard connections. We disagree on the facts assumed by the Commission in its treatment of the NSI fund but propose to engage further with the Commission during the determination process. In respect of paragraph (b), we have deleted the reference to GAAP. Where we are able to identify the value of the obligations assumed by Chorus under the settlement	1.1.4 Interpretation **Capital contribution** means: (a) money or the monetary value of other considerations charged to or received in relation to the construction, acquisition or enhancement of a **core fibre asset** or **UFB asset** by a **regulated provider** from 1 or more of the following: (i) an **access seeker**;

	agreement between Chorus and CIP dated 29 June 2012, we will net it off the asset value.	(ii) an **end-user**; or (iii) any other party; and (b) includes the ~~$20 million fund established~~ value of the obligations assumed by **Chorus** ~~for~~ ~~**financial loss year**~~ ~~2013~~ under the settlement agreement between Chorus and CIP dated 29 June 2012 in respect of non-standard installations~~, and consequently this fund is treated as if it is revenue under~~ ~~**GAAP**~~; but (c) does not include any **Crown financing**;
1.1.4 Debt premium reference year	Fibre providers' disclosure year ends on 30 June. 30 November would be consistent with the Commission's use of a 31 August date for EDBs which operate to a disclosure year ending 31 March.	1.1.4 Interpretation **Debt premium reference year** means a 12-month period ending on ~~31 August~~ 30 November
1.1.4 Leverage	The value of leverage depends on the context in which it is used.	1.1.4 Interpretation **Leverage** means the ratio of debt capital to total capital ~~and is 31%~~
1.1.4 Nelson-Siegel-Svensson approach	Delete reference to the Nelson-Siegel-Svensson approach due to poor fit.	~~**Nelson-Siegel-Svensson approach** means a method for modelling yield curves and term structures of interest rates which establishes a relationship between terms to maturity and the **debt premium**, where a curve is generated by changing the parameters of a yield curve's functional form to minimise the squared deviation between estimated and observed values;~~
1.1.4 Notional tax asset value	The Commission's "notional tax asset value" rules limit the tax net book value to be at most the accounting net book value. As the Chorus FAR does not fully depreciate tax assets in the last year of their accounting lifetime, Chorus' FAR does have some assets (and hence some asset classes) where the tax net book value is greater than the accounting net book value. If we were to follow the Commission's approach, the tax net book value and the tax depreciation would diverge from the accounts. This appears to be an unintended result of the Commission's proposed drafting, so we have suggested amendments. This requires amendments to clause 2.3.2 in Part 2, subpart 3, and to clause 1.1.8 in Schedule B, as well as associated defined terms.	1.1.4 Interpretation **Notional tax asset value** (a) for the purpose of a fibre asset, has the meaning in clause 2.3.2(3)~~; and~~ ~~(b) for the purpose of a UFB asset, has the meaning in Schedule B~~.

1.1.4 Proxy asset allocator	In some cases it will be appropriate to use proxy asset or cost allocators that are derived from information over a longer period than the most recent disclosure or financial loss year. We have therefore proposed an amended definition that would require the quantum of proxy allocators to be based on factors relevant to the year in which the allocation is carried out, but not limited to information from the most recent disclosure or financial losses year.	1.1.4 Interpretation **Proxy asset allocator** (a) for the purpose of determining the financial losses asset, has the meaning specified in Schedule B; and (b) in all other instances, means a ratio (i) used to allocate asset values for which a causal relationship cannot be established; and (ii) whose quantum is based on factors ~~in existence during the 12-month period terminating on the last day of the most recent~~ relevant to the disclosure year in respect of which the proxy allocation is carried out, which in each case- (iii) is consistent with similar measures, both within a disclosure year and from year to year; and (iv) is objectively justifiable and demonstrably reasonable.
1.1.4 Proxy cost allocator	In some cases it will be appropriate to use proxy asset or cost allocators that are derived from information over a longer period than the most recent disclosure or financial loss year. We have therefore proposed an amended definition that would require the quantum of proxy allocators to be based on factors relevant to the year in which the allocation is carried out, but not limited to information from the most recent disclosure or financial losses year.	1.1.4 Interpretation **Proxy cost allocator** (a) for the purpose of determining the **financial losses asset**, has the meaning specified in Schedule B; and (b) in all other instances, means a ratio (i) used to allocate **operating costs** for which a **causal relationship** cannot be established; and (ii) whose quantum is based on factors ~~in existence during the 12-month period terminating on the last day of the most recent~~ relevant to the disclosure year in respect of which the cost allocation is carried out, which in each case- (iii) is consistent with similar measures, both within a disclosure year and from year to year; and (iv) is objectively justifiable and demonstrably reasonable.
PART 2, Subpart 2		

2.1.5(6)	We note that the Commission intends on applying the shared cost cap to pre-2011 costs. As we have previously noted, if the Commission continues with the cap on shared costs it should meet the conditions below: Only be used for new services. The ordinary objective of these type of tests is to assess whether a new (usually unregulated) service will bear at least the incremental cost that it causes; Not apply retrospectively. Applying a shared cost cap to copper costs does not provide any additional incentives to reduce cost, as they are largely unavoidable; and Be based on objective data, rather than hypothetical scenarios; i.e. the cap should only apply where there is data to show shared costs are avoidable.	(5) Subject to subclause (~~7~~6), when a **regulated provider** allocates either:[1] (a) an **asset value** **commissioned** in a **regulatory year** after the **implementation date**; or (b) an **operating cost** incurred in a **regulatory year** after the **implementation date**, that is not **directly attributable** to **regulated FFLAS** because it is partly incurred or **employed** in the provision of **services that are not regulated FFLAS** that the **regulated provider** commenced providing after the **implementation date**, the total **asset values** or **operating costs** allocated to **regulated FFLAS** must not be more than the total **asset values** or total **operating costs** less those costs that the **regulated provider** could have avoided if it ceased supplying **services that are not regulated FFLAS**. (6) Subclause (~~6~~5) only applies: (a) to an allocation or allocations of an **asset value** or an **operating cost** that would have a material effect on the total **asset values** or total **operating costs** allocated to **regulated FFLAS**; and (b) where the avoidable costs of supplying **services that are not regulated FFLAS** can be directly observed with reference to cost data held by the **regulated provider**.
PART 2, Subpart 3		
2.3.2	The Commission's "notional tax asset value" rules limit the tax net book value to be at most the accounting net book value. As the Chorus FAR does not fully depreciate tax assets in the last year of their accounting lifetime, Chorus' FAR does have some assets (and hence some asset classes) where the tax net book value is greater than the accounting net book value. If we were to follow the Commission's approach, the tax net book value and the tax depreciation would diverge from the accounts. This appears to be an unintended result of the Commission's proposed drafting, so we have suggested amendments.	2.3.2 Regulatory tax asset value … (2) 'Tax asset value' means- (a) in respect of the following **fibre assets**, the value of the **fibre asset** determined by applying the **tax depreciation rules** to its **notional tax asset value**: ~~(i) a fibre asset in an initial RAB where, as of the date when the~~ ~~'regulatory tax asset value' is determined at implementation date,~~ ~~the sum of unallocated initial RAB values is less than the sum of~~ ~~the adjusted tax values of all fibre assets in an initial RAB;~~

[1] Numbering of clauses reflects our proposed amendments to the cost allocation IM in our supplementary submission of 28 August 2020.

	This requires amendments to clause 2.3.2 in Part 2, subpart 3, and to clause 1.1.8 in Schedule B, as well as associated defined terms.	
PART 2, Subpart 4		
2.4.2(5), (6)	An equity beta of 0.87 is consistent with an asset beta of 0.60 and leverage of 31%. Debt costs are the mid-point of the range of costs including an allowance for the higher cost of a foreign bond issuance.	2.4.2 Fixed WACC parameters … (5) The 'Equity beta' is ~~0.71~~ 0.87. (6) 'Debt issuance costs' are costs associated with the issuance of debt by a **regulated provider** and are determined by the term of the **regulatory period**, where- (a) for a five year regulatory period, this is 0.25%; (b) for a four year **regulatory period**, this is 0.~~25~~31%; and (c) for a three year **regulatory period**, this is 0.~~33~~42%.
2.4.4(1)(b)	Amendment suggested for clarity.	2.4.4 Methodology for estimating average debt premium (1) The **Commission** will determine an estimate of an amount for the **average debt premium**- (a) for each **disclosure year**; and (b) within 1 month of the start of each **disclosure year**.
2.4.4(4)(a)(iii) 2.4.4(5)(d)(iii) 2.4.4(6)(a)(i), (b)(i), (c)(i), (d)(i), (e)(i)	The appropriate credit rating to determine the debt premium for a FFLAS provider is BBB.	2.4.4 Methodology for estimating average debt premium … (4)(a)(iii) have a **qualifying rating** of grade BBB; and (5)(d)(iii) has a **qualifying rating** of grade BBB; and (6)(a)(i) have a **qualifying rating** of grade BBB; and (6)(b)(i) have a **qualifying rating** of grade BBB; and (6)(c)(i) have a **qualifying rating** of grade BBB; and (6)(d)(i) have a **qualifying rating** of grade BBB; and (6)(e)(i) have a **qualifying rating** of grade BBB; and
2.4.4(5)(d)	Remove reference to the Nelson-Siegel-Svensson approach. The curve has a poor fit.	2.4.4 Methodology for estimating average debt premium …

		(5)(d) subject to subclause (6), estimating, by taking account of the average spreads identified in accordance with paragraph (c) ~~and having regard to the debt premium estimated from applying the **Nelson-Siegel-Svensson approach**~~, the average spread that would reasonably be expected to apply to a **vanilla NZ$ denominated bond** that-
2.4.8(4)	Adjusts the formula for debt issuance costs of 0.25% for debt with a five-year term.	2.4.8 Methodology for estimating term credit spread differential (4) For the purpose of subclause (3)(a), 'debt issuance cost re-adjustment' is the amount determined in accordance with the formula (which, for the avoidance of doubt, will be a negative number)- (0.0125 ÷ *original tenor of the* **qualifying debt** – 0.0025) × *book value in New Zealand dollars of the* **qualifying debt** *at its date of issue.*
PART 3, Subpart 5		
3.5.2(5), (6)	An equity beta of 0.87 is consistent with an asset beta of 0.60 and leverage of 31%. Debt costs are the mid-point of the range of costs including an allowance for the higher cost of a foreign bond issuance.	2.4.2 Fixed WACC parameters … (5) The 'Equity beta' is ~~0.71~~ 0.87. (6) 'Debt issuance costs' are costs associated with the issuance of debt by a **regulated provider** and are determined by the term of the **regulatory period**, where- (a) for a five year regulatory period, this is 0.25%; (b) for a four year **regulatory period**, this is 0.~~25~~31%; and (c) for a three year **regulatory period**, this is 0.~~33~~42%.
3.5.4(4)(a)(iii) 3.5.4(5)(d)(iii) 3.5.4(6)(a)(i), (b)(i), (c)(i), (d)(i), (e)(i)	All references to BBB+ changed to BBB to reflect the appropriate credit rating for a FFLAS provider.	3.5.4 Methodology for estimating average debt premium … (4)(a)(iii) have a **qualifying rating** of grade BBB; and (5)(d)(iii) has a **qualifying rating** of grade BBB; and (6)(a)(i) have a **qualifying rating** of grade BBB; and (6)(b)(i) have a **qualifying rating** of grade BBB; and (6)(c)(i) have a **qualifying rating** of grade BBB; and

		(6)(d)(i) have a **qualifying rating** of grade BBB; and (6)(e)(i) have a **qualifying rating** of grade BBB; and
3.5.4(5)(d)	Remove reference to the Nelson-Siegel-Svensson approach. The curve has a poor fit.	3.5.4 Methodology for estimating average debt premium … (5)(d) subject to subclause (6), estimating, by taking account of the average spreads identified in accordance with paragraph (c) ~~and having regard to the debt premium estimated from applying the **Nelson-Siegel-Svensson approach**~~, the average spread that would reasonably be expected to apply to a **vanilla NZ$ denominated bond** that-
3.5.5	For a price-quality path determination the 67th percentile is appropriate.	3.5.5 Methodology for estimating the ~~50~~67th percentile estimate of WACC (1) The **Commission** will determine a 67~~50~~th percentile estimate of vanilla **WACC**- (a) for each regulatory period; and (b) no later than 6 months prior to the start of each regulatory period. (2) The **Commission** will determine a 67~~50~~th percentile estimate of post-tax **WACC**- (a) for each **regulatory period**; and (b) no later than 6 months prior to the start of each **regulatory period**. (3) For the purposes of subclause (1) or (2), (a) the 67th percentile must be determined in accordance with the formula- ***mid-point estimate of WACC*** *+ 0.440 x* ***standard error*** ~~the mid-point estimate of WACC must be treated as the 50th percentile~~ (b) where the **standard error** of the **mid-point estimate of WACC** is 0.0124; and (c) the **mid-point estimate of WACC** must be treated as the 50th percentile.
3.5.7(1)	This clause is amended to reflect use of the 67th percentile estimate of WACC in a PQ determination	3.5.7 Application of cost of capital methodology (1) Where the **Commission** takes into account the cost of capital in making a **PQ determination**, the **Commission** will use the **67~~50~~th percentile**

		estimate of WACC determined in accordance with clause 3.5.5(1) and most recently published in accordance with clause 3.5.6.
3.5.7(2)	Amendment suggested for clarity.	3.5.7 Application of cost of capital methodology … (2) 'Term credit spread differential allowance' for a regulatory year in respect of the first regulatory period and a regulated provider is the maximum of nil and the amount determined in accordance with the formula- … *b* means the sum of: (a) ~~the sum of~~ forecast **opening RAB values** for all **core fibre assets** and the forecast **opening RAB value** for the **financial loss asset** for the **regulatory year** in question; and (b) ~~the sum of~~ forecast **value of commissioned assets** for all **core fibre assets** for the **regulatory year** in question;
3.5.10(2)	Adjust the formula for debt issuance costs of 0.25% for debt with a five year term.	3.5.10 Methodology for estimating term credit spread differential (2) For the purpose of subclause (1)(a), 'debt issuance cost re-adjustment' is the amount determined in accordance with the formula (which, for the avoidance of doubt, will be a negative number)- (0.0125 ÷ *original tenor of the* **qualifying debt** – 0.0025) × *book value in New Zealand dollars of the* **qualifying debt** *at its date of issue.*
Schedule B, Section 1		
1.1.1 (WACC definitions)	Replace the multiple WACC definitions with a single WACC for the pre-implementation period (defined below in clause 1.1.10).	1.1.1 Interpretation ~~**1 December 2011 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B~~ ~~**30 September 2021 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2012 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2013 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~

		~~**31 December 2014 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2015 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2016 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2017 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2018 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2019 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 December 2020 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**31 March 2012 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B;~~ ~~**30 November 2011 WACC** has the meaning specified in clause 1.1.10(2) of Schedule B ;~~
1.1.1 Financial loss WACC	Add a new definition: "financial loss WACC"	1.1.1 Interpretation **Financial loss WACC** has the meaning specified in clause 1.1.10(2) of Schedule B.
1.1.1 Proxy asset allocator	In some cases it will be appropriate to use proxy asset or cost allocators that are derived from information over a longer period than the most recent disclosure or financial loss year. We have therefore proposed an amended definition that would require the quantum of proxy allocators to be based on factors relevant to the year in which the allocation is carried out, but not limited to information from the most recent disclosure or financial losses year.	1.1.1 Interpretation **Proxy asset allocator** for the purpose of determining the **financial losses**, means a ratio- (a) used to allocate **asset values** for which a **causal relationship** cannot be established; and (b) whose quantum is based on factors ~~in existence during the 12-month period terminating on the last day of the most recent~~ relevant to the **financial loss year** in respect of which the cost allocation is carried out, which in each case- (c) is consistent with similar measures, both within a **financial loss year** and from **financial loss year** to **financial loss year**; and (d) is objectively justifiable and demonstrably reasonable.

1.1.1. Proxy cost allocator	In some cases it will be appropriate to use proxy asset or cost allocators that are derived from information over a longer period than the most recent disclosure or financial loss year. We have therefore proposed an amended definition that would require the quantum of proxy allocators to be based on factors relevant to the year in which the allocation is carried out, but not limited to information from the most recent disclosure or financial losses year.	1.1.1 Interpretation **Proxy cost allocator** for the purpose of determining the **financial losses**, means a ratio- (a) used to allocate **operating costs** for which a **causal relationship** cannot be established; and (b) whose quantum is based on factors ~~in existence during the 12-month period terminating on the last day of the most recent~~ relevant to the **financial loss year** in respect of which the cost allocation is carried out, which in each case- (c) is consistent with similar measures, both within a **financial loss year** and from **financial loss year** to **financial loss year**; and (d) is objectively justifiable and demonstrably reasonable.
1.1.1 UFB FFLAS	We understand this definition is aiming to ring-fence FFLAS provided under the UFB initiative. However, as currently drafted it excludes regulated FFLAS. This cannot be correct as UFB FFLAS will in most instances also fall within the definition of regulated FFLAS, which is defined widely as "all FFLAS provided by a regulated provider over a fibre network that is subject to regulations under section 226 of the Act." We suggest amending the definition to clarify this point, and also to clarify that UFB FFLAS includes FFLAS provided under a contract during the UFB initiative where the provisions of that contract have been preserved under Schedule 1AA of the Telecommunications Act.	1.1.1 Interpretation UFB FFLAS means any FFLAS provided by a regulated provider under the UFB initiative ~~for~~ during the financial loss period, and for the avoidance of doubt, ~~excludes any FFLAS that is regulated FFLAS~~ includes FFLAS provided under a specified contract that continues in force pursuant to clause 9 of Schedule 1AA of the Act."
Schedule B, Section 2		
1.1.2	Adjust the formula for the compounding factor to reflect the newly defined financial loss WACC.	1.1.2 Initial RAB value of financial loss asset … (5) For the purposes of subclause (2), a 'compounding factor' is the value calculated in accordance with the following formula- $\cancel{(1+WACC)^{days\ to\ implementation\ date/365.25}}$ $(1+\boldsymbol{financial\ loss\ WACC})^{days\ to\ implementation\ date/365.25}$

		~~where~~ ~~'WACC' means:~~ ~~(a) in respect of 1 December 2011, **1 December 2011 WACC**;~~ ~~(b) in respect of **financial loss year** 2012, **31 March 2012 WACC**;~~ ~~(c) in respect of **financial loss year** 2013, **31 December 2012 WACC**;~~ ~~(d) in respect of **financial loss year** 2014, **31 December 2013 WACC**;~~ ~~(e) in respect of **financial loss year** 2015, **31 December 2014 WACC**;~~ ~~(f) in respect of **financial loss year** 2016, **31 December 2015 WACC**;~~ ~~(g) in respect of **financial loss year** 2017, **31 December 2016 WACC**;~~ ~~(h) in respect of **financial loss year** 2018, **31 December 2017 WACC**;~~ ~~(i) in respect of **financial loss year** 2019, **31 December 2018 WACC**;~~ ~~(j) in respect of **financial loss year** 2020, **31 December 2019 WACC**;~~ ~~(k) in respect of **financial loss year** 2021, **31 December 2020 WACC**;~~ ~~(l) in respect of **financial loss year** 2022, **31 December 2021 WACC**;~~
1.1.3	Clause 1.1.3(4)(a) provides that revenue received from the use of an asset during its construction is netted off the "value of commissioned asset". The reference to revenue that is not included in "regulatory income" under an ID determination should instead refer to "UFB revenues cash flows" as this is the relevant revenue item for regulated income in the pre-implementation period. Clause 1.1.3(4)(b) provides that expenditure on a UFB asset after it is commissioned must be treated as relating to a separate asset. Chorus' principal source of information on the value and commissioning dates of UFB assets is its Fixed Asset Register. In some cases the FAR records subsequent capex on a commissioned asset as a separate asset and on other occasions the capex is recorded against the existing asset. As a practical matter, therefore, we propose an amendment to clause 1.1.3(4)(b) to permit either approach.	<u>1.1.3 Value of commissioned assets for UFB assets</u> … (4) For the avoidance of doubt: (a) revenue derived in relation to works under construction that is not included in UFB revenues cash flows ~~regulatory income under an ID determination or preceding regulatory information disclosure requirements~~ reduces the cost of an asset by the amount of the revenue if such a reduction is not otherwise made under GAAP; and (b) if, after a UFB asset is commissioned, a regulated provider incurs expenditure on the UFB asset that forms part of the cost of that UFB asset under GAAP, such expenditure <u>may be</u> ~~is~~ treated as relating <u>to that asset or to</u> a separate asset.

1.1.5	In our submission on the Revised IMs (23 Jul 2020) we proposed using actual values to 30 June 2020 for the transitional opening RAB as this would reduce uncertainty about the value. We propose making the actual values used for the financial loss calculation consistent with our submission.	1.1.5 Calculation of price-quality path forecast values for financial loss asset (1) For the purpose of clause 3.3.1(6)(d), the "opening RAB value" of the financial loss asset adopted under clause 3.3.1(6)(a)-(b) is determined by: (a) adopting actual values for calculations under clause 1.1.2(2)-(6) of Schedule B in respect of financial loss year 2012, financial loss year 2013, financial loss year 2014, financial loss year 2015, financial loss year 2016, financial loss year 2017, financial loss year 2018, financial loss year 2019 and and financial loss year 2020; and (b) applying forecasts for calculations under clause 1.1.2(2)-(6) of Schedule B in respect of ~~financial loss year 2020,~~ financial loss year 2021 and financial loss year 2022.
Schedule B, Section 3		
1.1.6	We agree with the Commission's updated decision to include "used length of linear assets", "power usage" and "number of events". However, as we submitted on the Draft IMs, Equi-proportional mark-up (EPMU) should be added to list as it allows for the mark-up of overhead or common costs over other relevant costs by pro-rating costs based on costs allocated in other relevant cost categories.	1.1.6 Allocation methodology for determining financial losses (1) For the purposes of allocating operating costs incurred under the UFB initiative to the provision of UFB FFLAS for a financial loss year- ... (c) the allocator types available to be applied to allocate operating costs not solely incurred in the provision of UFB FFLAS are: (i) number of customers, end-users, or premises (intact, connected or passed); (ii) number of ports; (iii) revenue; (iv) central office space; (v) peak traffic; (vi) average traffic; (vii) used length of linear assets; (viii) power usage; (ix) number of events; (x) equi-proportional mark-up; and (xi) any other allocator type as approved by the Commission. (2) For the purposes of allocating a UFB unallocated closing asset value or value of commissioned asset to the provision of UFB FFLAS under clause 1.1.2(6) of Schedule B for a financial loss year- ...

		(b) the allocator types available to be applied using ABAA, in accordance with clause 2.1.2, are: (i) number of customers, end-users, or premises (intact, connected or passed); (ii) number of ports; (iii) revenue; (iv) central office space; (v) peak traffic; (vi) average traffic; (vii) used length of linear assets; (viii) power usage; (ix) number of events; (x) equi-proportional mark-up; and (xi) any other allocator type as approved by the Commission.
Schedule B, Section 4		
1.1.8	In clause 1.1.8(2)(a), the words "the value of the UFB asset determined by applying the tax depreciation rules to" are not needed. The Commission's "notional tax asset value" rules limit the tax net book value to be at most the accounting net book value. As the Chorus FAR does not fully depreciate tax assets in the last year of their accounting lifetime, Chorus' FAR does have some assets (and hence some asset classes) where the tax net book value is greater than the accounting net book value. If we were to follow the Commission's approach, the tax net book value and the tax depreciation would diverge from the accounts. This appears to be an unintended result of the Commission's proposed drafting, so we have suggested amendments. This requires amendments to clause 2.3.2 in Part 2, subpart 3, and to clause 1.1.8 in Schedule B, as well as associated defined terms.	1.1.8 Regulatory tax asset value for UFB assets (1) 'Regulatory tax asset value', in relation to a **UFB asset**, means the value determined in accordance with the formula- adjusted tax ~~asset~~ value x result of asset allocation ratio ~~(2) 'Tax asset value' means-~~ ~~(a) in respect of the following **UFB assets**, the value of the **UFB asset** determined by applying the **tax depreciation rules** to its **notional tax asset value**:~~ ~~(i) a **UFB asset** in the **UFB asset base** where, as of the date when the 'regulatory tax asset value' is determined in the **financial loss period**, the sum of **UFB unallocated opening asset values** is less than the sum of the **adjusted tax values** of all **UFB assets** as of that date; and~~ ~~(b) in respect of any other UFB asset, its adjusted tax value.~~ ~~(3) 'Notional tax asset value' means for the purpose of subclause (2)(a)(ii), adjusted tax value of the UFB asset as of the date when the 'regulatory tax asset value' is determined, adjusted to account proportionately for the difference between the sum of the UFB unallocated opening asset values as of~~

		~~that date and the sum of the adjusted tax values of all UFB assets as of that date.~~
Schedule B, Section 5		
1.1.10(1), (2), (3)	Adjust the requirement to determine multiple values of WACC for the pre-implementation period to reflect the single financial loss WACC. Adjust the introduction to the WACC formula to reflect the single financial loss WACC. Add an adjustment to the 75th percentile to allow for the reasonable expectations of investors in 2011 of such an uplift. Add the definition of standard error to the end of the clause. Amend from post-tax to vanilla WACC to reflect the fact that this form of cost of capital provides for a more transparent calculation when tax losses are being made.	1.1.10 Methodology for estimating the weighted average cost of capital for the financial losses (1) Before the **implementation date**, the **Commission** will determine an estimate~~s~~ of ~~post-tax~~ vanilla **WACC~~s~~** for the purposes of clause 1.1.2(5) of Schedule B in respect of the **financial loss period**, where the estimate~~s~~ of the financial loss WACC is ~~**1 December 2011 WACC**, **31 March 2012 WACC**, **31 December 2012 WACC**, **31 December 2013 WACC**, **31 December 2014 WACC**, **31 December 2015 WACC**, **31 December 2016 WACC**, **31 December 2017 WACC**, **31 December 2018 WACC**, **31 December 2019 WACC**, **31 December 2020 WACC**, and **30 September 2021 WACC** are~~ determined in accordance with the formula~~s~~ specified in subclause (2). (2) For the purpose of subclause (1), the "financial loss WACC" is ~~"1 December 2011 WACC", "31 March 2012 WACC", "31 December 2012 WACC", "31 December 2013 WACC", "31 December 2014 WACC", "31 December 2015 WACC", "31 December 2016 WACC", "31 December 2017 WACC", "31 December 2018 WACC", "31 December 2019 WACC", "31 December 2020 WACC", and "30 September 2021 WACC" are~~ determined in accordance with the formula: $r_d \cancel{(1-T_c)} L + r_e(1-L) + 0.674 \times s$ (3) In this clause- … s is the standard error
1.1.11	For the pre-implementation period leverage of 40% is appropriate. Define the average corporate tax rate as at the date of estimation of the financial loss WACC. Equity beta of 1.08 is consistent with an asset beta of 0.65 and leverage of 40%.	1.1.11 Fixed WACC parameters for financial losses (1) For the purpose of clause 1.1.10 of Schedule B, 'leverage' means the ratio of debt capital to total capital and is ~~31%~~ 40%.

	The debt issuance costs are the mid-point of the range of costs including an allowance for the higher cost of a foreign bond issuance. Consistent with a single WACC for the financial loss period and an estimation date of 1 May 2011. Insert new clause to define the standard error.	(2) For the purpose of clause 1.1.10 of Schedule B, 'average corporate tax rate' is 28%~~the average of the corporate tax rates that, as at the date that the estimation is made, will apply during the financial loss year~~. … (4) For the purpose of clause 1.1.10 of Schedule B, the 'Equity beta' is ~~0.71~~1.08. (5) For the purpose of clause 1.1.10 of Schedule B, 'debt issuance costs' are costs associated with the issuance of debt by a regulated provider and are 0.25%. (6) For the purpose of clause 1.1.10 of Schedule B, 'tax-adjusted market risk premium' is 7.0%~~:~~ ~~(a) in respect of the period starting on 1 December 2011 and ending on the last day before the commencement date, 7.0%;~~ ~~(b) subject to (c), in respect of the period starting on the commencement date and ending on the close of the day immediately before implementation date, 7.5%; and~~ ~~(c) in respect of financial loss year 2021, a weighted average of 7.0% and 7.5% where the weights for 7.0% are the months prior to the commencement date and the weights for 7.5% are the months subsequent to the commencement date within that financial loss year.~~ (7) For the purpose of clause 1.1.10 of Schedule B, 'standard error' is 0.0124.
1.1.12	The risk free rate should be the rate estimated to apply as at 1 May 2011. The term should match the expected term of the period; that is to 31 December 2019. The estimate should be based on the average of one month of daily observations prior to 1 May 2011, consistent with the Commission's approach at that time.	1.1.12 Methodology for estimating risk-free rate for financial losses (1) For the purpose of clause 1.1.10 of Schedule B, the **Commission** will estimate a risk-free rate~~s~~- (a) ~~that apply to each~~ for the **financial loss period** ~~financial loss **year**~~; (b) with a fixed term of the risk-free rate of ~~5~~ 8.7 years; (c) by obtaining, for notional benchmark New Zealand government New Zealand dollar denominated nominal bonds, the wholesale market linearly-interpolated bid yield to maturity for a residual period to maturity equal to the term specified in paragraph (b) on each **business day** in the ~~3~~ 1 month~~s~~ preceding~~:~~ 1 May 2011 ~~(i) in respect of the 1 December 2011 WACC, 1 December 2011;~~ ~~(ii) in respect of the 31 March 2012 WACC, 31 March 2012;~~

		~~(iii) in respect of the 31 December 2012 WACC, 31 December 2012;~~ ~~(iv) in respect of the 31 December 2013 WACC, 31 December 2013;~~ ~~(v) in respect of the 31 December 2014 WACC, 31 December 2014;~~ ~~(vi) in respect of the 31 December 2015 WACC, 31 December 2015;~~ ~~(vii) in respect of the 31 December 2016 WACC, 31 December 2016;~~ ~~(viii) in respect of the 31 December 2017 WACC, 31 December 2017;~~ ~~(ix) in respect of the 31 December 2018 WACC, 31 December 2018;~~ ~~(x) in respect of the 31 December 2019 WACC, 31 December 2019;~~ ~~(xi) in respect of the 31 December 2020 WACC, 31 December 2020;~~ ~~(xii) in respect of the 30 September 2021 WACC, 30 September 2021;~~ (d) by calculating the annualised interpolated bid yield to maturity for each **business day**; and (e) by calculating the unweighted arithmetic average of the daily annualised interpolated bid yields to maturity.
1.1.13	Amend drafting for consistency with a single WACC for the financial loss period and an estimation date of 1 May 2011. Change the rating to BBB and the term to 7 years. Remove reference to Nelson-Siegel-Svensson approach. All references to BBB+ changed to BBB to reflect the appropriate credit rating for a FFLAS provider. Amendments to reflect a 7 rather than 5 year term of debt.	<u>1.1.13 Methodology for estimating the debt premium for financial losses</u> (1) For the purpose of clause 1.1.10 of Schedule B, the **Commission** will determine an estimate of an amount for the **debt premium** that applies to the **financial loss period** by- (a) using the debt risk premium prevailing at <u>1 May 2011</u> ~~the beginning of the financial loss year in which the median loss occurred~~; and (b) using a term for the debt risk premium of ~~5~~<u>7</u> years.

(2) 'Debt premium' means the spread between-

(a) the bid yield to maturity on **vanilla NZ$ denominated bonds** that-

(i) are issued by a **regulated fibre service provider**;

(ii) are publicly traded;

(iii) have a **qualifying rating** of grade BBB; and

(iv) have a remaining term to maturity of a duration equal to ~~5~~7 years; and

(b) the contemporaneous interpolated bid yield to maturity of notional benchmark New Zealand government New Zealand dollar denominated nominal bonds having a remaining term to maturity of a duration equal to ~~5~~7 years.

(3) For the purpose of subclause (1), the amount of the debt premium will be estimated by-

…

(d) subject to subclause (4), estimating, by taking account of the average spreads identified in accordance with paragraph (c) ~~and having regard to the **debt premium** estimated from applying the **Nelson-Siegel-Svensson approach**~~, the average spread that would reasonably be expected to apply to a **vanilla NZ$ denominated bond** that-

(i) is issued by a **regulated fibre service provider** that is not 100% owned by:

(A) the Crown; or

(B) a **local authority**;

(ii) is publicly traded;

(iii) has a **qualifying rating** of grade BBB; and

(iv) has a remaining term to maturity of a duration equal to ~~5~~7 years.

…

(4)(a)(i) have a **qualifying rating** of grade BBB; and

(4)(b)(i) have a **qualifying rating** of grade BBB; and

(4)(c)(i) have a **qualifying rating** of grade BBB; and

(4)(d)(i) have a **qualifying rating** of a grade different to BBB; and

(4)(e)(i) have a **qualifying rating** of a grade different to BBB; and

		… For the purpose of subclause (4)- (a) progressively lesser regard will ordinarily be given to the spreads observed on the bond types described in accordance with the order in which the bond types are described in subclause (4); (b) the spread on any bond of the type described in subclause (4) that has a remaining term to maturity of less than a duration equal to ~~5~~7 years will ordinarily be considered to be the minimum spread that would reasonably be expected to apply on an equivalently credit-rated bond issued by the same entity with a remaining term to maturity of a duration equal to ~~5~~7 years; and (c) the **Commission** will adjust spreads observed on bonds described under subclauses (4)(b) to (4)(f) to approximate the spread that is likely to have been observed had the bonds in question been of the type described in subclause (4)(a).