

28th January 2020

Contents

Introduction.....	2
L1 Perspective – examining the Fibre Input Draft Determination through equity investor lens.	3
Question 1: Does the draft determination give investors a fair expectation of earning a normal return on their fibre investment, accounting for all the risk of building and operating the fibre network?.4	4
Issue 1: Commerce Commission’s allowance for stranding risk does not reflect regulatory risks faced by Chorus and the significant penetration of fixed wireless services in the market.....	5
Issue 2: Draft determination’s use of BBB+ credit metric doesn’t reflect the realistic credit rating of a regulated provider and doesn’t align with the other parameters used to set the WACC.....	16
Issue 3: The WACC calculation for the loss period materially underestimates the risk borne by investors.....	19
Issue 4: A WACC uplift is needed to ensure returns WACC is not underestimated and provide sufficient incentives to invest in fibre outside UFB areas.....	25
Issue 5: The Commerce Commission’s definition of FFLAS imposes additional restrictions on Chorus that will make it very difficult to recover efficient costs.....	26
Question 2: Does the draft determination reflect the commitments and promises made by the NZ government and Crown Fibre Holdings at the beginning of the UFB project towards equity investors?	27
Question 3: How does the allowed return in the draft determination compare with allowed returns from owning other regulated fibre assets outside of NZ?	29
Question 4: Is private and public capital in the UFB project being treated equally?	33
Conclusion	35



Introduction

The Commission published its Fibre input methodologies draft decision on 19th of November 2019 and has asked for submissions from interested parties.

L1 manages money for a range of clients including large superannuation funds, global endowment funds, high net worth individuals and retail investors. L1 invests globally with North America, Europe, UK, Australia and NZ being key focus areas and has made significant investments in New Zealand over the last 6 years. L1 would like to thank the Commission for the opportunity to present its views as an equity investor.

The Commission has dedicated a very significant amount of time, effort and thought in understanding how best to give effect to the new fibre legislation. L1 believes that the framework set up by the Commerce Commission is a comprehensive attempt to put together all the different parameters of the fibre legislation into a model that can be quantitatively interrogated and be subject to informed debate. L1 thanks for the Commission for all its hard work in this regard.

L1 Perspective – examining the Fibre Input Draft Determination through equity investor lens.

L1 assesses the draft determination based on the following four questions. These questions would be common among all equity investors

Question 1: Does the draft determination give investors a fair expectation of earning a normal return on their fibre investment, accounting for all the risk of building and operating the fibre network?

This goes to the fairness of the regulation and whether investors can expect to earn a normal risk adjusted return from continuing to be invested in the fibre network. It also goes to the question of whether the regulatory regime can be trusted to provide an expectation of fair returns in the future

Question 2: Does the draft determination reflect the commitments and promises made by the NZ government and Crown Fibre Holdings at the beginning of the UFB project towards equity investors?

This goes to the issue of sovereign risk and resetting the goalposts after investment has been made, and ultimately about whether to invest in future innovative infrastructure projects in NZ

Question 3: How do the allowed return in the draft determination compare with allowed returns from owning other regulated fibre assets outside of NZ?

This is important given investors can invest in several regulated fibre projects globally, many of which are actively seeking new investment to build out fibre networks. A regulated return below that allowed by other regulators will see investment flow out of NZ and not provide incentives for existing fibre networks to invest or innovate. It also sends a message that investing in innovative projects is likely to provide a lower return in NZ, than elsewhere.

Question 4: Is private and public capital in the UFB project being treated equally?

This goes to the basic fairness of the regulations and whether private capital can have expectation of earning same level of return as public capital when it invests in an equivalent project with equivalent risks in NZ

The fibre legislation effectively regulates private capital (Chorus) through a PQ regime and public capital through an IM regime. If the draft legislation allows for wide latitude to determine key parameters for public capital and imposes an impossibly high efficiency standard for private capital it will send a strong negative signal to investment markets.

The remainder of our submission will examine the draft determination through the prism of these four questions

Question 1: Does the draft determination give investors a fair expectation of earning a normal return on their fibre investment, accounting for all the risk of building and operating the fibre network?

Commerce Commission framework for calculating a fair return on investment

The Commerce Commission has put together a framework of three economic principles to help in implementing the Part 6 regime and the appropriate returns for fibre operators. L1 believes that this a robust framework that should allow for calculation of fair returns for a fibre operator under the Act.

These are:

- (a) “**Real financial capital maintenance (FCM):** a regulated provider has the ex-ante opportunity to earn a normal return on capital – that being profits that compensate for its cost of capital over time, considering its exposure to risk.” (2.162.1)*
- (b) “**Allocation of Risk:** Ideally, we allocate risks to regulated providers or consumers depending on who is most able to manage the risk, unless doing so would be inconsistent with the Part 6 purposes. Appropriate risk allocation, and where relevant appropriate compensation for the risks carried, maintains incentives to invest and promotes efficient behaviour.”*
- (c) “**Asymmetric consequences of over-/under-investment:** we apply FCM recognising any asymmetric consequences to end-users of regulated FFLAS, over the long-term, of under-investment versus overinvestment.”*

L1 believes that there are 5 key areas where these principles are not reflected in the Draft Determination which we explore in this submission

1. **Issue 1:** Commerce Commission’s allowance for stranding risk does not reflect regulatory risks faced by Chorus and the significant penetration of fixed wireless services in the market
2. **Issue 2:** Draft determination’s use of BBB+ credit metric doesn’t reflect the realistic credit rating of a regulated provider and doesn’t align with the other parameters used to set the WACC
3. **Issue 3:** The WACC calculation for the loss period materially underestimates the risk borne by investors.
4. **Issue 4:** A WACC uplift is needed to ensure returns WACC is not underestimated and provide sufficient incentives to invest in fibre outside UFB areas.
5. **Issue 5:** The Commerce Commission’s definition of FFLAS imposes additional restrictions on Chorus that will make it very difficult to recover efficient costs.

Issue 1: Commerce Commission’s allowance for stranding risk does not reflect regulatory risks faced by Chorus and the significant penetration of fixed wireless services in the market

The draft determination imposes additional conditions on operators under the PQ regime which greatly increases competition risks for fibre networks and is not compensated through the stranding allowance. This will result in a failure to achieve a normal return on capital by a fibre operator over time, adjusted for risk

New Zealand’s fibre legislation goes beyond a simple Part 4 RAB approach and instead introduces additional conditions for telecom operators which affect the returns for investors and the impact the probability of normal returns on an ex ante basis. We have listed these below

Additional condition on Fibre Operator	Reference in Draft Decision	Impact on regulated entity
Anchor prices:	2.101.3 <i>“Anchor services are wholesale services that are intended to ensure that voice and basic broadband services are provided at reasonable prices and to specific quality standards, and to act as an appropriate constraint on the price and quality of other FFLAS”</i>	Locks in a price for basic consumer fibre products and increases risk of under-recovery versus revenue cap if higher value products can’t be sold
Geographic averaging of prices	PQ Legislation <i>“Prices charged by a regulated provider for FFLAS that are, in all material respects, the same are required to be the same, regardless of the geographic location of the access seeker or end-user.”</i> 3.1519.1 – Note 34 <i>“Geographic consistent pricing implies cross-subsidisation may already occur”</i>	Results in providers over-pricing in dense urban areas to offset subsidy in rural areas to achieve regulated returns - thus increasing risk of competition and overbuild in urban areas where economics for fixed wireless substitution are most favourable
Smoothing of any price increases over multiple periods	3.1352 <i>“We may also smooth revenues over two or more regulatory periods under s 197 of the Act, where in our opinion it is necessary or desirable to do so to minimise any price shocks to end-users.”</i>	Lengthens payback period and increases risk of under earning over multiple periods in the event the regulated entity is earning under revenue cap (likely for Chorus in first period). Extending the payback period also increases stranding risks
Assets can be taken out of RAB due to competition	3.1088 <i>“In particular we note, where competition does emerge for a regulated FFLAS, we would consider... removing the associated assets from the RAB so that a regulated provider cannot be assured that it can recoup those costs from across its entire end-user base.”</i>	Possibility for assets to be deregulated and taken out of RAB before efficient costs are recovered in the event 5G competition emerges.

Move to cost based pricing for anchor products	2.2752 <i>“Cost allocation rules could also help support a future move to cost-based pricing for the anchor product, DFAS and/or any other FFLAS products that we might consider appropriate”</i>	A move to cost-based pricing would lower the price of anchor products further and push out recovery of costs. This lowers returns and risk that assets are stranded before efficient costs are recovered
Focus on promoting substitute products through price caps and subsidies	PQ Legislation <i>“DFAS and backhaul services to mobile cell sites and fixed wireless sites are covered under a price cap. Additionally DFAS prices can further be changed to cost based approach”</i>	Regulatory focus on fostering competition which includes subsidising inputs into competing telecom products (DFAS, ICABS etc) increases stranding risks from 5G services. This is a particular risk in future given the Commission has given itself wide remit to increase subsidies for key 5G inputs for pro competition purposes.
Requirement for disclosure and review of capex to ascertain competition effects	Capex IM	Increases stranding risk through forced investment in substitutes. Information disclosure requests reveals exact areas that Chorus intends to target for investment giving competitors information advantages and opportunity to make investment before Chorus has the opportunity to do so

The impact of many of these conditions is to significantly increase stranding risk for fibre investment by:

(a) Increasing the risk of overbuilding and competition in the densest, most profitable part of the network:	<ul style="list-style-type: none"> - Geographic averaging of prices - Caps on DFAS and backhaul prices with an option to move to cost-based pricing, - Review and approval of capex to promote competition in network.
(b) Removing the potential to recover investment once an area in network is subject to competition:	<ul style="list-style-type: none"> - Removal of competitive areas out of RAB
(b) Delaying the time to recover investment, with under recovery in early periods, significantly increasing the amount time investors are exposed to stranding risk	<ul style="list-style-type: none"> - Smoothing of any price increases over multiple periods - Anchor pricing - Move to cost-based pricing of anchor products

The Commission has noted these issues but has not acknowledged the effect that these additional requirements have on stranding risk, which are very significant cumulatively

The Commission has made statements in its draft determination which support L1’s views that these conditions place significant additional risks on operators. We highlight these below

Additional condition on Fibre Operator	ComCom comment in Draft Decision	Comment
Geographically consistent prices, anchor services :	3.1311.2 <i>“The requirements for geographically consistent pricing and potential for a prescribed maximum price for anchor services may limit the ability for regulated providers subject to PQ to achieve the revenue cap than would otherwise be the case.”</i>	Appears to Support L1 Assessment
Removal from RAB of deregulated assets	3.266 <i>Under PQ regulation, the removal of assets from the RAB due to deregulation may affect the ability of providers of regulated FFLAS to recover the full costs of the remaining regulated assets from the remaining end-user base of regulated FFLAS.</i>	Appears to Support L1 Assessment
Smoothing of any price increases over multiple periods	3.1352 <i>“We may also smooth revenues over two or more regulatory periods under s 197 of the Act, where in our opinion it is necessary or desirable to do so to minimise any price shocks to end-users. This may lead to an alternative depreciation profile which again would be expected to push revenue back in time”</i>	Appears to Support L1 Assessment

However none of these factors are referenced when the Commerce Commission calculates the overall stranding risk, which it assesses, as low.

“3.1382 Overall, we believe that the risk of economic stranding of the type we are compensating for, is at most a 10% chance of 40% of the asset value of the asset value over the next ten years while it is more realistically, lower.”

This is contrary to evidence from Ingo Vogelsang and Martin Cave who note that geographic averaging under the NZ legislation introduces risk to FTTH operators that are not present in other jurisdictions

“Under the EU state aid framework “black” geographic areas are those where infrastructures are at least duplicated so that infrastructure competition is feasible. In “grey” areas infrastructure investment by a single firm occurs without requiring subsidies, while in “white” areas only subsidized investment is possible.”

“When setting up its UFB investment scheme New Zealand embarked on an approach that combined all three types of areas to be supplied with fibre-to-the-home (FTTH) networks by single firms that promised full coverage in their areas in return for some state aid.³ Thus, Chorus and the other LFCs⁴ in the initial fibre bidding process implicitly cross-subsidized expected profits from “black” and “grey”

areas with losses from “white” areas to come up with a required net subsidy for the whole coverage. A geographically disaggregated approach to promoting competition or to deregulation decisions therefore raises some thorny issues if it, for example, means that Chorus and the other LFCs due to increased competition lose the subsidies from “black” and “grey” areas necessary to support “white” areas.” (page 9)

“Conversely, if a geographically disaggregated approach were used for deregulation, the “black” areas would be deregulated. Then the remaining “grey” and “white” areas would have to cover their costs under building block regulation and would therefore very likely suffer significant price increases.”

These comments suggest European Regulation does not use geographic averaging unlike the NZ approach and that the NZ approach introduces challenges for fibre operators if “black” or competitive area are deregulated. If competitive areas were deregulated and a vanilla RAB approach was used the cost would be borne by remaining users with very significant price increases occurring. However, given these assets would be removed from the RAB and anchor pricing would continue to apply most of these costs would fall to the infrastructure owner

Vogelsang and Cave also note that while allowing competition in 4G and 5G does not breach regulatory commitment to fibre operators as it was anticipated by the market, actively promoting such competition does as it signals intent to promote competition even at the cost of stranding fibre investment

“We still believe that allowing competition, for example, by cable TV firms or 4G/5G would not breach regulatory commitment, because these developments were totally exogenous to the fibre rollout and/or were associated with technical and market developments that the regulator also could not foresee” “Specifically and actively promoting such competition by the regulator, however, would in this case likely be a breach of regulatory commitment.”

It would be hard to argue that legislative actions such as DFAS and backhaul price caps, capex reviews for pro-competitive impacts and a disclosure regime that asks for the identity of targeted customers, the amount of expenditure and unit cost information does not amount to active promotion of competition by the regulator that will result in higher stranding risk

Commerce Commission’s estimate of stranding risk - 10% probability of stranding over 40% of the RAB (effectively a 4% stranding risk within next 10 years) is not consistent with the fixed wireless and HFC substitution already occurring in the market.

An examination of 2018 and 2019 connections suggests currently 14% of all connections within the UFB network are HFC and wireless. That number has grown in 2019, despite increased availability of FTTH services. Wireless operators have already indicated their intention to lift this significantly as 5G services begin from 2020 onwards and wireless spectrum becomes available from 2022.

	HFC + other Connections	Vodafone FWA Connections in UFB areas(1)	Spark FWA Connections in UFB areas(1)	Total UFB Homes	FWA+ HFC Penetration	Source
Dec 2018	66,000	143,550		1,753,000	12%	ComCom Dec 2018 report
Jun-Dec 2019	66,000	34,800	144,420	1,753,000	14%	Spark referenced FY19 financial results, Vodafone disclosures from recent FWA launch(2)
Vodafone + Spark plans By 2022(3)	66,000	87,000	170,520(3)	1,753,000	19%	Vodafone disclosures from FWA(2), Spark FY20 results(3)
UBS Estimate for FWA bypass	66,000	260,000		1,753,000	19%	UBS Chorus research Jan 2020

Notes:

(1) Total FWA subscribers for Vodafone and Spark prorated by 87% within UFB coverage area.

(2) Nz Herald: Vodafone begins fixed wireless push, supersizing data caps

https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12302264

(3) Additional target of 30,000 households from current level in FY20 specified by Spark. Currently 20% of all its broadband customers served on FWA.

This analysis highlights 14% of households within the UFB network are already bypassing the fibre network through existing fixed wireless and HFC services even before 5G starts. RAB investments in those households are currently generating close to 0% return and are

at risk of being stranded. The only returns from these households is indirect through usage of DFAS by the wireless operators which L1 estimates to be in the low millions of dollars Using a % of RAB measure for stranding risk does not capture the fact that it is dense urban areas that are likely to be stranded and these represent a much larger contribution to returns for Chorus than implied by the RAB. It is % of regulated revenues that the Commerce Commission should focus on in its assessment

Chorus's UFB footprint includes dense urban areas (UFB1) as well as outer metropolitan regions and more rural areas under UFB2 and UFB2+. It is important to note that UFB1 areas have:

1. Higher mix of high value non anchor connections due to higher household wealth and bigger mix of fibre business lines
2. Are lower cost to serve given lower maintenance costs and better economies of scale
3. Have a lower RAB capex per household than UFB2 and UFB2+ areas given the much higher cost to build of UFB+ and UFB2+.

Therefore, RAB is the incorrect methodology for calculating stranding risk for a regulated fibre provider. It understates the risks to regulated revenues that result from stranded investments in dense urban areas, which are the areas most challenged by competition.

L1 estimates that 80% of regulated revenues are at risk of being stranded with 15% to 23% chance that stranding will occur. We set out our methodology below

Step 1: Over the longer term (10 years) we expect all dense urban area to be at risk of being stranded. We estimate this represents 80% of regulated revenues.

Our estimate is based on the following observations. The Chorus UFB project is divided into three areas. These are

UFB Build Area	Number of homes Passed	Comment
UFB1	~1,100,000 (80%)	areas with the highest density as reflected by low level of Crown financing. This covers 1.1m homes and businesses in Chorus areas
UFB 2	~200,000 (15%)	Homes and businesses in outer metropolitan areas
UFB 3+	60,000(5%)	Users in rural or near rural areas.

L1 would expect that all UFB1 areas are at risk at being stranded due to the following reasons

1. these are the areas where there is enough density for mobile competition to be economic
2. geographic averaging and subsidised backhaul and DFAS services from Chorus will ensure that competition can price in these areas with attractive margins
3. The Commerce Commission's position is to incentivise competition in urban fibre areas over time where there is a benefit to the end user. The Commerce Commission has already indicated their willingness to do this through regulating DFAS and backhaul fibre inputs prices, examining future capex decision through a pro-competition lense and setting quality paths to incentivise competition.

L1 would note that competition in UFB 2 areas is consistent with Vodafone's recent announcement about where new high FWA plans are being launched

"new 300GB and 600GB plans and the 1TB trial will be widely available in urban areas including Auckland, Wellington and Christchurch, and in most parts of Hamilton, Tauranga, Dunedin, Queenstown, Palmerston North, Napier, New Plymouth, Rotorua, among other centres (see vodafone.co.nz/coverage)"

Step 2: We calculate a risk that 15%-23% of revenues at risk will end up being stranded

This is an inherently subjective area as the Commission itself has acknowledged.

However, we believe the logical approach to fibre substitution is to examine two groups of users

- (1) existing wireless and HFC users and
- (2) fibre network users on the lowest speed tiers.

Existing wireless and HFC users

A logical approach is to start with consider the % of users that are already on mobile and HFC networks within the UFB areas. These users have chosen mobile and HFC services because they have a higher level of utility despite having access to competing fibre services. As we have noted above the number of FWA and HFC users is continuing to increase even as fibre availability in UFB footprint increases. The utility of these services is likely to increase further as 5G spectrum is deployed from 2022 onwards.

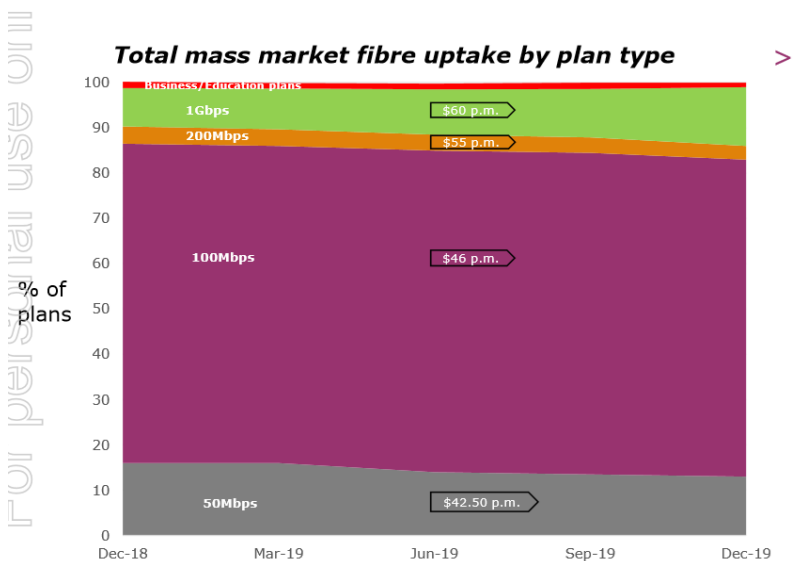
Based on the evidence around stranding available today(increased HFC+ RWA penetration even as fibre roll out completes, the most realistic assumption is that of the 14% of users using alternate networks in UFB areas today, 75% to 100% of them will not transition to fibre services.

Existing and future fibre users that opt for lowest tier fibre plans

The next category of users at risk of migration are fibre users who are currently on the lowest speed 30/10 fibre service (recently upgraded to 50/10 speeds at no charge by Chorus but still referred to as 30/10 plans).

These are the users with a lesser need for high speed services for whom mobile would offer similar speed and capability to their fibre plan. These are also the most price sensitive users given the small pricing differential between 50 Mbps and 100 Mbps plans. For example, there is just a \$4 price difference between Spark 30/10 and 100/20 fibre prices. This highlight the high price elasticity of these users, in our opinion.

Chorus’s Q2 FY20 connection report highlighted that with 56% of all homes passed connected to the fibre network, approximately 13% chose the lowest tier plan. Given the large sample size we believe it is reasonable to assume some 13% of all fibre users within the Chorus UFB networks will end up at lowest tier plan once the copper transition is complete.



L1 believes a significant proportion of these users will be attracted to new mobile services in dense urban areas through new mobile FWA services that can offer even small (\$5-\$10 month) price discounts. Even at the same price as fibre, FWA services offer utility to some consumers (mobility of FWA is particularly attractive to renters, for example) that will lead to switching.

Spark's current FWA service is priced at a discount to the fibre service and boasts additional inclusions, and we believe can achieve significant churn away from Chorus network. Vodafone's new FWA price sits at \$63, a \$2 discount to the 30mbps service. With 5G spectrum these services may become even more compelling.

L1 would note that upgrading low end fibre users to higher speed services would be likely ineffective in preventing stranding given these users are highly price sensitive and will respond to discounts. These users are also highly likely to be very price sensitive to any increase in the price of the anchor service, which will further impeded ability to recover costs.

There is a broad range of outcomes for these users but a 25% - 60% risk of stranding seems a reasonable estimate.

Combining these two user groups together we believe that the risk of stranding is between 15% to 23%.

	Total Connection within UFB area	% chance these users are stranded (remain on HFC + RWA)	% of Total UFB homes stranded
HFC + FWA connections (2019)	14% of all UFB homes	80% -100%	11.2% to 14%

Fibre Homes	Total % of Fibre Connections	Total % users in UFB areas using fibre(i.e. not on HFC+FWA)	% chance these homes are stranded (transition out of fibre)	% of Total UFB homes stranded
Fibre 30/10 Mbps users(assuming 13% take basic fibre plan)	13%	86%	25%- 60%	3.3% -7.8%
Other Fibre users	87%	86%	0%	0%

Combined Analysis	HFC + RWA	Low end Fibre Homes	Other Fibre Homes	Total Stranding Risk
Stranding Risk	11.2% to 14%	3.3% to 7.8%	0%	15% to 23%

As a crosscheck we would note Vodafone & Spark have signalled for FWA by 2022 which would equate to 19% of all homes in UFB areas. L1 thus believes estimate is reasonably in line with their corporate plans

Step 3: L1 estimates that 80% of the RAB revenues are at risk with a 15% to 23% chance of stranding occurring. Based on the Commerce Commission's analysis this equates to a 140bps to 210bps increase in the discount rate.

L1 agrees with the Commission that other potential mitigants to address stranding risk are far less effective and the focus should be on ex-ante compensation.

The Commission has already highlighted some of the issues around other compensation mechanisms around asymmetric risk.

L1 agrees and believes most other approaches have a similar weakness- they attempt ex post to make adjustments while the stranding has already occurred. The adjustment applies to a smaller base of revenues to compensate regulated asset owners. However, they do so as part of legislation regime where users are protected from price shocks.

We note the Commission's comments below which we agree with

"3.1300.1 We consider there is some risk that the options of retaining assets in the RAB (with the exclusion of deregulated assets), shortening asset lives or adopting an alternative depreciation path may fail to sufficiently mitigate stranding risk and provide an expectation of a normal profit. This would not best promote the outcome in s 162(a) or be to the overall benefit of end-users."

"3.1352 We may also smooth revenues over two or more regulatory periods under s 197 of the Act, where in our opinion it is necessary or desirable to do so to minimise any price shocks to end-users. This may lead to an alternative depreciation profile which again would be expected to push revenue back in time. These factors will act against shortening asset lives or limit the extent to which asset lives can be shortened."

"In this respect, the role of asset lives may not be important because the accumulated unrecovered returns and wash-up to the revenue cap may 'extend' the real asset life of the value at risk. In essence, if the revenue generated does not cover the revenue cap, depreciation is 'recharged' forward."

Who is better able to manage the risk of asset stranding due to technology risk? L1 would strongly argue it is the consumers who stand to benefit from cheap alternative internet services and can manage the risk

The Commerce Commission's economic principles for assessing regulated returns include an assessment of allocation of risk, with risk allocated to regulated providers or consumers depending on who is most able to manage the risk.

L1 would argue that prima facia it is difficult to argue that consumers are not in a better position to handle stranding risk than regulated providers.

Stranding occurs because, by definition, an alternative service has come along that delivers better utility on one or more dimensions to the end customer (price, convenience) such that they switch away from the regulated service.

So, customers, in effect gain utility as the stranding risk increases. Existing users can either take advantage of the new service or continue to use the existing regulated service and not suffer price shocks because of the anchor price. L1 acknowledges that for higher specification users there will be an effect on utility, but it would be very small as they have the option to revert to the anchor services or the alternative non fibre substitute. The anchor service is likely to have high levels of capability, given the price quality path, so the loss of utility would be marginal.

In totality stranding risk increases utility for a high % of regulated users and may reduce utility for a small % of users. By contract, standing risk is unambiguously negative for a regulated fibre service.

We would note that Dr Lally (Attachment H) appears to also support the view consumers are better placed to bear this risk.

Summary

L1 understands the intention of the Act to foster pro-competition policy where possible and minimise impact on consumers but that intent must be reflected through a higher allowance for stranding risk.

There is significant evidence that 14% of the network today is stranded through alternative HFC and fixed wireless services and the current intention from the operators is to penetrate to 19% of all UFB broadband households. L1 analysis shows that 80% of RAB revenues are at risk of stranding and there is between a 15% to 23% chance of stranding occurring resulting in a need to lift discount rate by 130bps-200bps to account for stranding risk.

In that context a 10bps allowance grossly understates the risk of stranding borne by the operator and will almost certainly result in an inability to recover efficient costs over the life of the investment. L1 does not believe it can be justified based on the evidence in front of the Commission today.

Issue 2: Draft determination's use of BBB+ credit metric doesn't reflect the realistic credit rating of a regulated provider and doesn't align with the other parameters used to set the WACC

For most of the parameters used in setting the WACC for the regulated entity the Commerce Commission has used the comparator companies. For example, in setting asset betas the Commission has explained that

*"We consider that the best way to produce an unbiased WACC, reflecting outcomes in workably competitive markets, balancing s 162 (a) and (d) outcomes, and promoting workable competition consistent with s 166(2)(b), is to use the same approach that was developed in 2010 for Part 4 and has been used since in Part 4 and for the copper FPP. **"That approach involves adopting as the asset beta the average across comparator companies of de-levered equity betas combined with the debt premium in the cost of debt being weighted by the average leverage of the comparator companies."***

The Commerce Commission has departed from that approach in setting a BBB+ for the regulated provider and explained its reasoning as follows

- *"this sends the appropriate signal on the prudent long-term level of exposure to credit default risk, and that a credit rating set two notches above the minimum investment grade", "at BBB+, sends the appropriate signal as a baseline approach",*
- *"BBB+ is not inconsistent with the comparator sample".*
- *"The notional approach ensures that the benchmark credit rating does not fall below investment grade in the future and, although the credit rating decision does not determine a regulated supplier's actual credit rating, we consider that this is an important consideration in best giving effect to the purpose of Part 6 in s 162"*

The Commission further explained its reasoning below which seems focused on maintaining the credit metrics of the regulated firm to avoid failure

"3.843 We consider that the long-term benefit of end-users is only served by properly capitalised businesses that can refinance themselves as necessary, including in economic downturns or shock events In our view the main alternative is to use the regulated provider's actual credit rating. A notional rating is specified as, if regulated providers' actual credit ratings were used, they may have less incentive to maintain an appropriate credit rating given the increased costs associated with a lower credit rating would be partially compensated through the WACC, leading to potentially adverse implications for end-users. Specifically, as credit rating worsens, the adverse implications for end-users relate to: 3.845.1 increased credit default risk "

The Commerce has also acknowledged the decision will decouple the actual credit rating from the one used in setting the WACC

- *"Hence our draft decision is to decouple the regulated provider's actual credit rating from the one used to estimate the cost of capital for regulated FFLAS."*

Our comments are below

- **A BBB+ regulated rating works against the Commission's goals by increasing stress on the revenues of the regulated entity and increasing regulatory risk.**

As the Commission itself has acknowledged the regulated rating does not determine the actual credit rating of the regulated entity. Chorus has never achieved a BBB+ rating on its debt during its time as a listed company due to a range of risks including technology risk, operating risk, regulatory risk as well as gearing levels. All that a BBB+ rating in WACC calculation achieves is to lower allowed returns which impairs the ability to invest and service debt. Additionally, decoupling the rating from real credit costs or that of the comparator set sends a strong negative signal to rating agencies that may contribute to a credit downgrade for regulated entity. This seems counterproductive.

- **It is inconsistent with the calculation of the CFH loans which use real costs to calculate the benefit of CFH funding.**

The Commission has justified this based on needing to avoid over recovery and use real costs but seems to have not used the same principle when it comes to calculating the credit rating for Chorus. This is, inconsistent, violates the principles of FCM and deprives Chorus of the opportunity to recover its costs during the build period.

- **The Commerce Commission already has strong protections built into the fibre Act to ensure consumers are protected and penalties for non compliance. The UFB contract also had very strong performance protections built into it which dictated the capital policies of Chorus during the build period.**

During the build period, Chorus had to maintain a minimum investment grade credit metric and commit to delivery milestones with significant penalties for non-completion and step in rights. Therefore, the UFB contract already specified the minimum credit rating that CFH determined was necessary to protect the end consumer, which Chorus was compliant with. It seems incorrect to now retrospectively apply an even higher minimum credit rating after the build has been completed.

In the 2022 post build period, the fibre Act gives the Commission wide powers through the capex IM and the quality paths to ensure appropriate investment is made and penalties for non compliance. These are far more likely to incentivise the fibre operator than applying an impossible efficiency standard.

- **Imposing a BBB+ standard on regulated provider is tantamount to unstitching the UFB contract and resetting the commercial terms retrospectively.**

Chorus and its investors bid on the UFB contract based on the conditions placed by CFH in 2011. Again, this included a minimum investment grade credit metric as well a number of other conditions during the build period and some broad regulatory principles for when the build was completed.

At the time of the award of the contract the government could have specified a minimum credit rating (including AA as an extreme example) for the regulated provider. Chorus and

investors would have incorporated that additional condition into the level of subsidy they needed to earn the returns on the project, with a higher credit rating requiring a higher WACC and a higher level of CFH contribution/fibre price. Applying a minimum credit rating of BBB+ in 2020 to the project amounts to a rewrite of the CFH contract.

- **A BBB+ rating is not consistent with comparator set.**

As CEPA has noted “For the updated comparator sample, the average credit rating for the wholesale group is BBB-/BB+, and BBB-/BBB for the integrated group.” (page 43, CEPA report)

This comparator set is the most appropriate comparator set since it is used for asset beta and other calculations. It incorporates the range of companies closest to Chorus with the most similar range of operating and technology risks.

Some of these companies cannot achieve investment grade metrics due to operating challenges in their business or regulatory risk. If they are included in calculation for the purposes of asset beta it is inconsistent to then exclude them because they do not have an investment grade credit.

The credit rating is an outcome of the comparator set process – the comparators are chosen and the asset beta, leverage and credit rating is derived from the comparators. Injecting a minimum credit rating is a regulatory decision that is independent of deriving the WACC which delivers an NPV=0 outcome for regulated provider. By applying an artificial efficiency standard it results in a regulated provider being unable to recover its fair returns, which is the reason for the WACC calculation.

Even applying Commission’s requirement for a credit rating, CEPA’s analysis shows an investment grade rating “indicates an average rating of BBB/BBB- for the wholesale group and BBB+/A- for the integrated group” (page 43, CEPA report). Given the vast majority of companies in the comparator group are integrated companies, the likely average credit metric is far closer to BBB than BBB+.

Issue 3: The WACC calculation for the loss period materially underestimates the risk borne by investors.

3(a) The calculation of the loss asset does not include an allowance for stranding risk during the build period. Stranding risk is borne by investors from the start of the project build till all efficient costs are recovered. Applying it only for some of the period is not a logical application of project finance and leads to an under recovery of efficient costs.

The Commission has chosen to not apply a cashflow adjustment for stranding risk during the loss period and has explained its decision as follows:

*“However, we do not consider it appropriate to compensate for stranding risk ex-post when there has not been an explicit arrangement put in place ex-ante for this to happen. **We are not aware of any ex-ante compensation for stranding risk was incorporated into the price caps of the regulated providers during the pre-implementation period.**”*

We would strongly disagree with that assessment. The document that most clearly lays out NZ government’s intent is the Government’s policy statement from 2011. Although the Government Policy is high level (and it would be unreasonable for it address every source of risk and how the Commission should address that risk in a future decision) it clearly states that:

“The Government’s economic policy is that businesses have incentives to innovate and invest in new or upgraded ultra-fast broadband infrastructure for the long term benefit of end users “recognises that revenues, over the life of the assets, are sufficient to cover operating costs and a normal return on, and recovery of, capital invested” and “takes into account the start-up risks associated with the introduction of new technology”(emphasis added)

A key start up risk related to a new service is commonly understood to be insufficient demand and the risks of assets being stranded before normal return on capital can occur. L1 believes it is clear the intent of government policy was to compensate for stranding risk and other risk related to building a new fibre network.

L1 would also note that only starting to recognise stranding risk for a fibre operator 10 years into the ownership period is at odds with project finance theory and violates the FCM principle the Commission has committed to. Chorus as the fibre builder is at risk from stranding from the first day of investment till its efficient costs are recovered and should be compensated for that risk through the allowance.

One could argue that if the loss asset was not subject to stranding risk in the post 2022 period then no allowance would have to be made. However, the Commission has made it clear that loss asset will be removed in line proportion with other elements of the RAB if stranding was to occur in the post 2022

*“3.268 Our draft decision is to maintain symmetric treatment and **remove the cost component relating to deregulated assets from both the main RAB and the financial loss asset. We consider that the ability to recover revenue from the financial loss asset is closely linked to the ability to recover revenue from the main RAB. This means that, as the size of the RAB decreases due to removing deregulated cost components, so does the ability to recover revenue from the financial loss asset.**”*

Therefore, investors are at risk of not just losing revenues from post 2022 period but also losing revenues from the 2012-2022 period if stranding occurs in the future. **FCM and project finance suggests they should be compensated for that risk through an allowance through the period that revenues were at risk from stranding, which is 2012 onwards.**

3(b) The calculation of the loss asset fails to consider the additional risk born by investors during the build period. These include the costs and conditions imposed on Chorus by the CFH contract. These risks are also different to the risks faced by the comparator companies used to calculate asset beta and should be compensated through a higher WACC.

The risks of building new fibre network within the constraints of the UFB contract are significant and not captured by the commission's WACC calculation, which looks at a subset of telecom business with significant established operations and high visibility of revenues and much lower levels of capex

Key CFH terms are listed below:

Risk	Impact
Financial Penalties and step in rights for failure to achieve construction milestones: If New Chorus does not perform its obligations under the UFB Agreements, there is a range of remedies available to CFH, including various levels of liquidated damages, specific damages claims capped at NZ\$350 million, and...termination rights.	Penalties increase risk to Chorus equity holders as they built their network. Conceptually Chorus investors had to estimate % chance of penalties being triggered and the penalty amount to derive expected loss. This was an ex ante risk at the time of the build.
Higher cost of debt during build period:	Negative cashflow profile, high levels of financial leverage and need to secure debt through the build period all increased the cost of debt relative to a traditional infrastructure operator. The Draft Determination does not allow for this.
Requirement to maintain investment grade credit metrics through build period:	Requirement to maintain investment grade credit meant that any cost overruns in the UFB project had to be covered by suspension of dividends and/or an equity raise since no additional debt capital was available. This had the effect of raising equity beta for equity investors during the build period by raising implied financial leverage.
Costs	
Chorus issuance of warrants to CFH: Gives right to purchase a New Chorus Share at a specified date between 30 June 2025 and 30 June 2036, with the price of the New Chorus Share based on a total shareholder return of 16% per annum. (Chorus demerger document)	The price of these warrants has not been factored into the draft determination. Note that these are a further cap on outperformance for equity holders on top of revenue caps, price and deregulation
Fees and additional costs in relation to CFH funding	Provided for in the draft IM

These risks are in addition to the other risk faced by the fibre operator during the build period which we covered in our previous submission

Risk	UFB build period (2012-2022)	Regulatory period beginning 2023	L1 Comment
Construction risk -Risk of cost overruns during build phase	High: Very large financial obligation related to build with all risk borne by equity holders	Low: Communal build largely complete and large section of premises connection complete by 2023	Construction risk is higher than set of comparable companies given extreme capital intensity of rolling out UFB network and should be reflected in a higher asset beta.
Risk of insufficient demand for fibre services	Very high: Unclear demand for fibre services at inception of projection. Penalties from CFH for insufficient take-up of fibre services in form of accelerating CFH equity repayments	High: Fibre take up to 2019 is running in line with projections	Clearly higher than during first regulatory period: Demand risk has been viewed as a systematic risk by other regulators and reflected through uplift in allowable WACC.
Risk of financial penalties for non-completion of build milestones	High: Financial penalties for non-completion and step in rights(see previous section on CFH instruments)	Low: Communal build should be largely complete by 2023	Clearly higher than risk in first regulatory period
Balance Sheet Risks:	High: Cost of not maintaining investment grade rating during build period is very high for equity holders (see section on CFH instruments)	Medium: End of build period should allow stronger cashflow generation, supporting credit metrics	As covered in section above this greatly increased risk to equity holders by increasing effective leverage and equity beta
Interest rate risk	High: High amount of financial leverage, higher interest rates and negative cash flow profile make Chorus sensitive to rates	Medium: Ability to match interest rate to regulatory period and cashflow generation mitigates risks	Clearly higher than during regulatory period

The Commission has decided not to include a WACC uplift in Draft Determination for the following reasons. Our emphasis is added.

*“The risks that may be systematic include aggregate demand, operating leverage, the specification of price and potential for growth opportunities. It is possible that the aggregate demand risk and potential for growth opportunities were higher during the pre-implementation period compared to the post-implementation period. Operating leverage may also have been higher during the pre-implementation period when capital costs made up a proportionally greater share of costs, which could point to a higher asset beta for the pre-implementation period. Overall, any adjustment to the asset beta to account for differing systematic risk in the pre-implementation period and post-implementation periods would be arbitrary and difficult to quantify. **It is reasonable to assume that the case for a higher asset beta due to aggregate demand risk, lower operating leverage and construction risk is offset by the case for a lower asset beta due to the compensation for losses.**”*

L1 appreciates there the calculation of WACC includes many areas subject to significant judgment by the Commission (including stranding risk, the appropriate comparators for asset beta and many others) but the Commission has made choices in each of these areas because it recognised that not doing because it was difficult or imprecise would violate financial capital maintenance principal (FCM) and result in an under recovery of costs.

In the case of systematic risk there is a very reasonable argument for a higher asset beta due to higher aggregate demand risk, lower operating leverage and construction risk as the Commission itself has acknowledged.

On the other hand, compensation for losses, presumably through the loss asset does not give a higher degree of protection than the wash up regime that applies post 2022. The loss asset is still subject to stranding risk, as we have explored in the previous section so to the extent the losses accrued and guaranteed are in a deregulated area they will not be recovered. Additionally, the loss asset still has the possibility of not being recovered if the revenue cap is not achieved, so it subject to the all the usual risks including that are present in the post 2022 regime.

One could argue that the costs Chorus incurred in 2012-2022 were somehow not efficient and represent a windfall but absolutely no evidence of that being presented and the project was carefully managed by CFH at a very detailed level. As equity investors during the period, we can attest that Chorus was very focused on efficient delivery of the fibre build, given the strain the project was putting on the balance sheet and the reduced revenues from copper services.

There thus appears to be a strong basis for awarding an uplift to reflect the risks of a new fibre build. That would be consistent with the intention of government policy in 2011 and with the approach several other regulators have taken, where construction risk, demand risk and operating leverage of a new fibre network were called out as a basis for an uplift.

If the Commission cannot quantitatively determine the basis for an uplift using a refined comparator set for example, they could apply a WACC % uplift percentile, to account for this risk.

The Commission has made adopted a similar approach for other regulated entities to consider costs that are more difficult to assess. **The Commission could also adopt L1's suggested approach, which adjusts the equity beta to account for the higher gearing profile in the build period due to presence of CFH funding combined with construction risk.** Our full analysis can be found in the July 2019 submission Effectively the construction risk together with the CFH requirements for credit rating and financial penalties greatly increased the risk to equity holders for any cost overrun. We reproduce the table below which shows the impact of a capex cost overrun on credit metrics. The requirements of the UFB contract would have required an equity raise and/or suspension of dividend to fund this cost overrun.

Selected Financials	2013	2014	2015	2016	2017	2018
EBITDA(1)	663	649	602	594	652	653
Net bank debt (incl. derivatives)	1,716	1,596	1,639	1,652	1,715	1,909
Net snr debt for S&P rating (incl CFH snr debt)	1,953	1,827	1,842	1,848	1,945	2,239
S&P net debt/EBITDA	2.95x	2.82x	3.06x	3.11x	2.98x	3.43x
Add CFH sub debt and equity at face value	103	225	335	454	541	651
Total funding obligations	2,056	2,052	2,177	2,302	2,486	2,890
Fibre Growth	579	566	504	486	503	607
Other Opex	102	113	93	107	131	143
Total Capex	681	679	597	593	634	750
Cumulative Capex	681	1360	1957	2550	3184	3934
Implied gearing (inclusive of CFH debt and equity at face value)	3.10x	3.16x	3.62x	3.88x	3.81x	4.43x
Impact of cumulative of \$600m cost overrun on credit metrics	4.01x	4.09x	4.61x	4.89x	4.73x	5.34x
(1) EBITDA impacted in 2017 and 2018 year by change in accounting standard						

3(c) The Commission's calculation of debt costs is not in line with real costs experienced by Chorus during the build period. This is inconsistent with Commission's approach to CFH funding and violates the FCM principle the Commission has outlined

L1 does not believe the proposed treatment of the pre-2022 WACC, in terms of an annual recalculation, accurately and fairly reflects the commercial reality of the UFB contract partners. Chorus committed investors' capital to the UFB project in 2011 when it entered into the public-private partnership with the Crown. The terms of the contract meant Chorus could not revisit the level of capex committed each year thereafter. The Crown Fibre Holdings Response to Select Committee Questions (2011) clearly indicates pricing was set by reference to the estimated WACC at this point in time. Furthermore, Chorus locked in debt financing at the start of the project through to 2020, so that it could participate in and fund the rollout. It did not have the opportunity to reset that rate every following year in the way the Commission's draft decision suggests. These factors all point to a requirement that the Commission should determine the WACC at the start of the rollout and apply it through to the start of the first regulatory period in 2022.

Issue 4: A WACC uplift is needed to ensure returns WACC is not underestimated and provide sufficient incentives to invest in fibre outside UFB areas.

There is a material standard error in the WACC estimate calculation by the Commerce Commission. In the context of a circa 5% WACC a 50 to 100bps estimation error is equivalent to an under recovery of 10% to 20% of fibre costs.

A WACC of 4%, for example, will absolutely cause underinvestment since it is well below the return available from alternative infrastructure investments in NZ as well as fibre investments internationally. This is especially relevant given the headline WACC determined by the Commission is materially below that allowed for other fibre projects internationally, as we show later in this submission.

The Commerce Commission has commented on the circumstances where a WACC uplift is desirable to promote investment

3.1075.5 Where the net costs of a WACC mis-estimation causing overinvestment are expected to be less than under-investment, it would be in the long-term benefit of end-users to allow an uplift to the WACC and would better balance the outcomes in s 162(a) and (d) of the Act.

L1 has previously submitted on the benefit identified by Sapere of UFB investment on consumer surplus. The Commerce Commission has provided a calculation but L1 believes a different approach to the calculation is warranted. Specifically, Sapere identified the costs to consumers of the UFB not occurring, which is exactly what has occurred for the 13% of users outside the UFB area.

For users outside the UFB areas the utility of the UFB project the consumer surplus would be estimated at 13% x 32.8bn (total consumer benefit identified by Sapere over 20 years) = 4.3bn over 20 years or 215m per year.

L1 does not believe investors would support incremental in these high cost areas without a WACC uplift (given the higher return available from other fibre projects outside Chorus) so it highly likely these areas will not have any material UFB investment in the absence of a WACC uplift.

The Commerce Commission has acknowledged that expanding the network would have beneficial benefits but has determined the number of users is small. L1's observation is that (a) 13% of households is material and (b) the uplift in utility available to the users is very high as identified by Sapere.

"3.1141 We recognise that expanding the network can be particularly beneficial to end users who would not otherwise have access to regulated FFLAS. However, we consider that the number of such end-users are small, and the regime has other aspects which alleviate these potential concerns"

Finally we agree with Houston Kemp that while a WACC uplift has a cost to end users, the regulatory regime has a number of additional protections including the anchor price, washups, geographic averaging of prices which mitigate the cost of an uplift to users inside the existing UFB areas.

Issue 5: The Commerce Commission's definition of FFLAS imposes additional restrictions on Chorus that will make it very difficult to recover efficient costs.

L1 would note several additional conditions in the draft determination which are troubling and appear to impose significant constraints on Chorus to earn revenues in line with MAR and make it very difficult to achieve efficiency standards under the Act

Commerce Commission 's definition of FFLAS is far too broad and brings almost all Chorus revenues into the regulatory regime, unwinding existing commercial contracts.

Commerce Commission's appears to have defined any service dependant on FFLAS in some way to be regulated under the Act, which given the design and interrelationship of the fibre network means almost of Chorus's fibre revenues will end up being regulated. We quote the Commission's draft decision below

"2.138 We have considered the meaning of "dependent" within the definition of end user as it applies to s 162. It could be argued a service is not dependent on FFLAS if there are commercial alternatives available. In our view, the term "end-user" must include all ultimate consumers of FFLAS. If a FFLAS is being used as an input into another service then it is being consumed by end-users of that other service, irrespective of whether or not an input comprising a telecommunications service that is not FFLAS is available. Therefore, end-user services will be "dependent" on a FFLAS whenever a FFLAS is used as an input to supply the end-user services, even where an alternative telecommunications service that is not FFLAS is available."

Chorus has in good faith struck several commercial arrangements with various parties regarding the use of their fibre services. These negotiations were conducted at arm's length and Chorus bid on these fibre projects based on its understanding on the commercial risk and returns of the project, including the length of the contract, service level obligations, price paths and other factors. In many cases the returns on capitals on these projects are understandably higher than that of the WACC reflecting the unique risk of the projects. Some notable projects include Chorus's work with 2 degrees, for example. Some of these fibre revenues predate the beginning of the UFB project.

L1 does not understand how these revenues and assets can be classified as within scope of regulation given doing so would violate the property rights of Chorus and rewrite private contracts.

These contracts continue today because they represent the best commercial option for the users of these services, and they have alternatives through non-Chorus services. Users of these fibre services can also build alternate fibre links using their capital and link them with core UFB network, which will have regulated returns. The Commission's decision will mean Chorus is even more reliant on regulated revenue to hit the MAR, which is already challenging given the anchor prices for core fibre, DFAS and backhaul services.

Question 2: Does the draft determination reflect the commitments and promises made by the NZ government and Crown Fibre Holdings at the beginning of the UFB project towards equity investors?

The NZ government has made previous commitments that “businesses have incentives to innovate and invest in new or upgraded ultra-fast broadband infrastructure” and should earn a regulated return on capital that “takes into account the start-up risks associated with the introduction of new technology”. In a CFH response to Select Committee Questions, CFH indicated that “reasonable return” will be based on the CAPM and noted that “the WACC is the **minimum** return that a company must earn on an existing asset base to satisfy its creditors, owners, and other providers of capital, or they will invest elsewhere”.¹ and identified a return of 8% to 10% as appropriate.

The current draft decision is at odds with this original vision, which goes to the issue of sovereign risk and resetting the goalposts after investment has been made, and ultimately about whether to invest in future innovative infrastructure projects in NZ.

In the document below, CFH has calculated an LFC Weighted Average Cost of Capital (WACC1) range of between 7.72% and 8.97% based on a Co-Op structure where Telecom NZ participates in the fibre project. The Co-op column in the below table is the relevant benchmark for our analysis.²

LFC Discount Rates	TCNZ Co-Op		TCNZ Competes		Comment
	Low	High	Low	High	
Risk-free rate	5.25%	5.25%	5.25%	5.25%	NZ 10 Yr Govt Bond
Bond rating	A-	BBB	BBB	BB+	
Corporate Bond Premium	1.50%	2.00%	2.00%	3.00%	Empirical and theoretical
Cost of Debt, pre tax	6.75%	7.25%	7.25%	8.25%	
tax rate	28.0%	28.0%	28.0%	28.0%	
Cost of Debt, post tax	4.86%	5.22%	5.22%	5.94%	
Equity Risk Premium	7.0%	7.0%	7.0%	7.0%	SBL uses tax adjusted risk premium & ComCom uses 7.0%. [MARP = TARP * Rf(T) = 7.00% - (5.25% * 0.28) = 5.53%]
Asset Beta	0.50	0.65	0.70	0.80	NBNCo Mckinsey Report = 0.50 to 0.65 [2010]. Ofcom est of Open Reach = 0.52 to 0.65 [2009]. Compete asset beta < TCNZ Group Asset Beta under Compete (0.81)
Equity Beta	0.85	1.17	0.91	1.12	TCNZ equity Beta (Bloomberg) = 1.10. Feedback from Answath Damadoran (Prof @ Stern School of Finance in NYC) believes LFC equity betas should be 0.8 - 1.0 given monopoly style characteristics
Cost of Equity	9.73%	11.97%	10.15%	11.62%	"Compete High" is toward top end of implementation study range but below TCNZ group under compete
D/E	70.00%	80.00%	30.00%	40.00%	Co-Op gearing is below gearing recommended by Implementation Study (>100%)
D/(D+E)	41.18%	44.44%	23.08%	28.57%	Implementation study = 50% to 65% based on telco & utility comps
WACC	7.72%	8.97%	9.01%	10.00%	Range of LFC WACC's lie between Utility WACCs and TCNZ group (9.90%)
WACC (TCNZ Consensus)	9.90%	9.90%	9.90%	9.90%	Consensus of TCNZ Equity Analysts

¹ Crown Fibre Holdings (2011), *CFH Response to Select Committee Questions*

² Ibid

In both the Low and High range, WACC is drastically higher than the current draft determination. Considering that CFH has indicated the WACC as a minimum return this is a significant setback for capital providers.

Chorus made commitments to invest in 2011 on a long-term basis under the conditions and commitments of the time. A draft number so radically different from original indications sets a difficult precedent for future capital providers looking for certainty.

The draft determination's asset beta has come in substantially lower than the High range for the Co-op scenario, which is relevant to Chorus today due to high leverage carried throughout the project. As the CFH noted the asset beta is a measure of business risk³, the use of a lower number penalises capital providers for investment into an asset previously seen by the CFH to be operating with substantial risk.

Consistency is a core principle key to building confidence for capital providers and it is important for NZ to allow a reasonable return on capital based on consistent commitments made over time.

³ Ibid

Question 3: How does the allowed return in the draft determination compare with allowed returns from owning other regulated fibre assets outside of NZ?

Despite the higher risk Chorus has taken on throughout the build process, Chorus' allowed return in the draft determination process sits lower than allowed returns on other international regulated fibre assets.

This has adverse consequences for NZ in a world of investment competing for global capital. Investors will not invest incremental capital unless the expected return from investing in NZ fibre is at least as good as the return they would expect to get from a different investment of similar risk. NZ needs to reward risk taking by compensating capital through WACC or stranding risk adjustment.

Other regulators have emphasised the importance of incentivising investment and aligning approaches between different regulatory regimes. Ofcom has recently noted that

*“the 2018 UKRN report identifies that the primary reason for the RAR (the regulatory allowed return) differing from the WACC is a concern about ‘disincentivising investment, along with an asymmetric loss function which makes underinvestment costlier than over-pricing’”.*⁴

Furthermore, as part of Ofcom's key objectives they have noted the importance of regulatory consistency

*“We aim to ensure that there is consistency in our decisions, both between parameters in a given decision and, as far as reasonably possible, with other regulatory decisions”*⁵ and noted their framework *“follows the same high-level principles established by the EC”* in its 2019 Notice. This Notice followed a 2016 report by Brattle for the EC which considered approaches used by European telecoms regulators to estimate the cost of capital.”⁶

L1 believes the Commerce Commission must consider whether its draft determination is reasonable in an international context and whether it will send a negative message to capital markets. **The Commission's current draft decision suggests a post-tax WACC of ~4.88% and an asset beta of 0.49 - both sitting on the low end of international benchmarks.**

Ofcom has recently come out with a WACC significantly higher than Chorus (7.1% for Openreach vs 4.88% in the Draft determination).

The Ofcom WACC decision is a continuation of global regulation of wholesale fibre networks consistently acknowledging the need to apply WACC uplifts to next generation fibre networks in order to compensate capital providers for the unique risks taken.

⁴ Ofcom (2020), *Promoting investment and competition in fibre network: Wholesale Fixed Telecoms Market Review 2021-2025 Annexes1-23 of 24*, A21.3

⁵ Ofcom (2020), *Promoting investment and competition in fibre network: Wholesale Fixed Telecoms Market Review 2021-2025 Annexes1-23 of 24*, A21.11

⁶ Ofcom (2020), *Promoting investment and competition in fibre network: Wholesale Fixed Telecoms Market Review 2021-2025 Annexes1-23 of 24*, A21.11

In the table below we can see that NZ fibre WACC is at the low end of the international comparators.

Although differences in risk free rates do impact the calculation of WACC, if we delve into the drivers of the WACC calculations we can see that the ComCom has underestimated risk parameters relative to other regulators – specifically the asset beta and the WACC uplift.

Jurisdiction	Tax	WACC	Asset Beta	Ftth WACC uplift	Equity Beta	Gearing	Debt rate	RFR
NZ fibre	Post Tax	4.88%	0.49	0%	0.71	31%	2.92%	1.12%
NZ fibre	Pre Tax	5.35%						
NZ copper⁷	Post Tax	5.56%	0.43	N/A	0.69	38%	4.92%	2.74%
NZ copper	Pre tax	6.56%		N/A				
UK Openreach⁸	Pre tax nominal	7.10%	0.57		0.88	40%	3.4%	1.5%
Italy copper⁹	Pre tax	8.64%	0.53	N/A	0.93	43.3%	4.63%	2.19%
Italy fibre¹⁰	Pre tax	11.84%		3.2%				
Netherlands copper¹¹	Post tax	4.54%	0.45	N/A	0.69	42%	5.30%	1.49%
Netherlands fibre¹²	Post tax	10.04%		5.5%				
Slovenia copper with size¹³	Pre tax	9.02%	0.52	N/A	0.76	31.05%	3.13%	1.84%

⁷ Commerce Commission of New Zealand (2015), *Cost of capital for the UCLL and UBA pricing reviews*

⁸ Ofcom (2020), *Promoting investment and competition in fibre network: Wholesale Fixed Telecoms Market Review 2021-2025 Annexes 1-23 of 24*

⁹ Agcom (2019), *Il calcolo del costo medio ponderazione del capitale (WACC) Aggiornamento dell'Allegato D alla delibera n. 623/15/CONS, Tabella 2*

¹⁰ European Commission (2019), *Commission Decision concerning case IT/2019/2181-2182: Wholesale local access provided at a fixed location and wholesale central access provided at a fixed location for mass-market products in Italy*

¹¹ Brattle (2015), *The WACC for KPN and Ftth*, July 2015.

¹² European Commission (2016), *Commission Decision concerning Case NL/2016/1947: Wholesale local access provided at a fixed location in the Netherlands - remedies*

¹³ European Commission (2018), *Commission Recommendation of 8.6.2018 in accordance with Article 7a of Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services ("Framework Directive") in Case Si/2018/2050: Wholesale high-quality access provided at a fixed location in Slovenia – Market Review*

Slovenia copper without size¹⁴	Pre tax	5.90%		N/A				
Slovenia fibre with size premium¹⁵	Pre tax nominal	11.52%		2.5%				
Slovenia fibre without size premium¹⁶	Pre tax nominal	8.40%		2.5%				

Looking at the above table there are a few clear observations on where NZ decision deviates from other regulatory decisions.

WACC uplifts:

Global regulators have consistently deemed that fibre assets have higher risks associated with them than copper assets and consequently made adjustments through the use of WACC uplifts.

This was made clear in the Brattle report to the Dutch regulator (ACM): “FttH activity may have a higher systematic risk than both wholesale broadband services provided over a copper network and FttO activity. Because of this potential difference ACM have asked us to estimate a separate WACC for the FttH activity”.¹⁷

- In the Netherlands, the all-risk WACC for FttH networks amounts to 10.04% under the ACM model. This figure is based on three elements, i.e. the WACC applicable to the copper network after taxes (4.54%), a **fibre increment (2%)**, and an **increment for asymmetric regulatory risk (3.5%)**. **WACC parameters have been defined for ACM by "The Brattle Group" in July 2015.**¹⁸
- **In Italy, the regulator has instituted a risk premium for FTTH at 3.2%**¹⁹
- **In 2017 AKOS (Slovenia) set a WACC uplift of 2.50% for NGA networks.**²⁰

¹⁴ Ibid 15

¹⁵ Ibid 15

¹⁶ Ibid 15

¹⁷ Brattle (2015), *The WACC for KPN and FttH*, July 2015.

¹⁸ European Commission (20168), *Commission Decision concerning Case NL/2016/1947: Wholesale local access provided at a fixed location in the Netherlands - remedies*

¹⁹ European Commission (2019), *Commission Decision concerning case IT/2019/2181-2182: Wholesale local access provided at a fixed location and wholesale central access provided at a fixed location for mass-market products in Italy*

²⁰ CEPA (2019), *Cost of capital for regulated fibre telecommunication services in New Zealand: Asset beta, leverage, and credit rating*

However, based on the Draft Determination, Chorus's fibre WACC is just 48bps higher than the WACC for Chorus's copper network, adjusted for the current risk-free rate, compared to a premium of 250bps to 550bps for other regulators.

Compared to the WACC rate for Chorus's copper network, the current fibre WACC is lower. Even if we adjust for the copper WACC for the fall in the risk free to reflect the rate used in fibre input draft (1.12%) the updated copper WACC is 4.40%. Comparing this to the fibre WACC of 4.88%, the uplift in WACC from copper to fibre is just 48bps, significantly lower than other regulators.

Other Risk Parameters

The risk parameters used by global regulators to calculate WACC are also consistently higher than the ComCom draft determinations with **NZ's equity beta being one of the lowest in the world, across both copper and fibre assets.**

Conclusion

The lack of a WACC uplift and lack of an appropriate equity beta has resulted in a significantly lower WACC for Chorus's fibre business when compared to the precedents set by global regulators.

If the WACC is carried through to the final determination, this will result in significantly lower returns from incremental fibre investment in NZ than elsewhere in the world.

This will in turn result in international capital leaving NZ to pursue higher yielding fibre opportunities internationally and a lack of capital to fund incremental NZ fibre investment. It will also send another message that innovative public partnership investments will not be rewarded with regulatory support in NZ, with implications for other NZ assets in the future.

Question 4: Is private and public capital in the UFB project being treated equally?

The current fibre legislation makes a distinction between private capital (regulated through a PQ regime) and public capital (regulated solely through an ID regime). While both sources of capital are investing in an equivalent asset with equivalent risks, there are discrepancies in the way they are treated. The draft legislation allows for wide latitude to determine key parameters for public capital and imposes an impossibly high efficiency standard for private capital.

This is not to be taken as a criticism of the ID legislation, however any discrepancy sends a very strong negative signal that the returns available to an investor from building fibre are very different depending on whether the source of capital is public or private.

Under the PQ legislation there are various areas where there is a high risk of normal returns not being earned. These include very high efficiency standards, potential stranding risk, loss assets not allowing for stranding risk and no WACC uplift despite material estimation error. However, under the ID regime, operators have very wide discretion to self-identify what their stranding risk is and what the appropriate WACC is.

Risk	Public capital approach (ID only)	Private capital approach (PQ)
Stranding risk	<ul style="list-style-type: none"> It is open to such providers to publish information indicating how they have accounted for asset stranding risk in their cash flows and evidence they have to support this. It is appropriate for ID regulation to give regulated providers greater freedom as to how they approach this type of issue rather than this being laid out in the IMs Regulated providers could publish their estimates of non-systematic asset stranding risk and how they are providing any contingency to account for this within their cash flows. This could include any evidence to support their submissions that regulated providers not subject to PQ regulation are subject to asymmetric stranding risk. The regulator will be cognisant of the presence of asset stranding risk when interpreting the results of any ex-post analysis of profitability. 	<ul style="list-style-type: none"> 10bps allowance materially understates current stranding already occurring No allowance for stranding risk during build period despite risk of loss asset being stranded and removed from RAB
WACC uplift	<ul style="list-style-type: none"> Regulated providers subject only to ID regulation can choose to disclose any additional evidence at any time including any 'uplift' they consider should be applied in the event of PQ 	<ul style="list-style-type: none"> No uplift allowed despite international regulators applying uplift for risk of fibre networks

	<p>being imposed through future regulations under s 226 and any evidence they have to support this.</p>	<ul style="list-style-type: none"> • No recognition that WACC is higher during build period. • No recognition of specific CFH restrictions that applied exclusively to Chorus
--	---	---

Based on the current draft determination the current PQ path imposes a higher burden on Chorus than regulation under the ID regime, leading to differences in the way private and public capital is treated on an equivalent asset.

This is deeply inequitable and suggests private capital maybe further penalized in the future. L1 would respectfully ask The Commerce Commission to again examine the totality of the Draft Determination to see if it can ensure a more consistent balance between PQ and ID regulation and private and public capital, including a fairer balance between risk and reward for private operators.

Conclusion

L1 would like to again thank the Commerce Commission for the considerable work undertaken to arrive at the Draft Determination. NZ's fibre legislation is complex, and the Commerce's Commission's widely consultative process and robust economic framework is to be truly applauded in giving NZ a regulatory regime that will be robust and stand the test of time

The Commission's choice of assumptions, however, do not reflect the significant risks and costs Chorus has faced to build the fibre network, nor the risk it will face in running it.

The UFB project took 10 years to construct during which time Chorus faced heightened construction and demand risk, rising financial leverage and significant risk of penalties from UFB contract. It funded this investment in the most efficient way it could using the debt available to it at the time. By not providing an uplift to the WACC and using a notional BBB+ rating, the Commerce Commission's draft determination has largely ignored these risks and costs.

At the end of the build Chorus has been left with a large amount of accumulated losses and a fibre network facing a significant stranding risk from alternative technologies. These risks apply both to the RAB of the network and the pool of losses, since they are treated equally under the legislation if stranding and deregulation occurs.


Other regulators have chosen to reflect these risks through a significant uplift in allowed returns relative to the legacy copper networks. Chorus's fibre WACC is lower than under copper and the 10bps allowance the Commerce Commission has provided for asymmetric risk does not appear to allow for the significant stranding that has already occurred through fixed wireless services.

A decision to price stranding risk at this level will result in a WACC significantly below that available to other fibre builders globally, resulting in international capital leaving NZ and a lack of capital to fund incremental NZ fibre investment. It will also send another message that innovative public partnership investments will not be rewarded with regulatory support in NZ, with implications for other NZ assets in the future.

At a higher level, the Commission's draft determination is significantly below the 8% to 9% WACC originally envisaged by CFH when the project was announced. Chorus made commitments to invest in 2011 on a long-term basis under the conditions and commitments of the time. A draft number so radically different from original indications sets a difficult precedent for future capital providers looking for certainty. It is also difficult to also not reflect on the wide gap between PQ and ID regulation and wonder whether public capital is being prioritised in setting returns which goes to the basic question of fairness.

L1 would urge the Commerce Commission to look at the totality of these issues in determining whether the draft WACC determination reflects the risk undertaken by Chorus in building and running the network.

Signed


Lev Margolin
Portfolio Manager


Raphael Lamm
Joint Managing Director