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STOCK EXCHANGE ANNOUNCEMENT

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Attached is an investor presentation summarising implementation of the fibre access services regulatory framework.

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Implementation of the fibre access services regulatory framework

27 September 2019

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Regulated Asset Base (RAB) framework to apply from January 2022

Legislation to implement the new RAB framework for fibre access services was passed with bipartisan support in November 2018.

- key focus of legislation is a smooth transition for consumers <u>and</u> investors
- the Commerce Commission has acknowledged importance of *real financial capital maintenance*: the ability to make a fair return on and of capital over the lifetime of the assets
- regulatory transition is unusual because the network will be almost completed before the framework is applied and has been delayed from original January 2020 timeframe
- Chorus will have under-recovered on more than $4 billion of investment (excluding shared assets) made in the decade since the UFB rollout started
- investors are clear that build and financing risks need to be recognised at the time they were addressed, not in hindsight
- the retrospective treatment of investment has implications for future public-private partnerships

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The new regulatory framework

87% of population where fibre will be available by end of 2022 →		Remaining 13% of population →
Fibre access network • Regulated asset base (RAB) with revenue cap to be determined by Commerce Commission • Price caps on contracted fibre products, with annual inflation adjustment, until 2022. Price caps then only apply to fibre voice service, a fibre broadband service and direct fibre. • Unbundled fibre (commercial price) to be available in UFB1 areas from 2020 and UFB2 areas from 2026 • Three years after new regime commences, the Commission can review the revenue cap model and anchor products, subject to specified conditions and statutory criteria	**Copper - where fibre is available:** • Copper network to be deregulated and Telecommunications Service Obligation (TSO) removed • Chorus can withdraw copper service, subject to minimum consumer protection requirements being developed by the Commission and due by mid-2020	**Copper - where fibre is not available:** • Copper remains regulated and TSO applies • Copper pricing capped at 2019 levels with CPI adjustments • Commission required to review pricing framework no later than 2025

Overview of current RAB implementation

The Commerce Commission is implementing the new framework

In May 2019, the Commerce Commission released an *Emerging Views* paper outlining its views on certain aspects of the input methodologies to apply under the new framework. Chorus and investors have made extensive submissions on issues raised by the *Emerging Views* paper.

The Input Methodologies are expected to be finalised by mid 2020, followed by Price-Quality decisions in mid 2021.

Indicative fibre regulation timeline

November 2019	Input methodologies draft decision due
June 2020	Input methodologies final decision due
Q4 2020	Draft price-quality path
Q2 2021	Final price-quality path

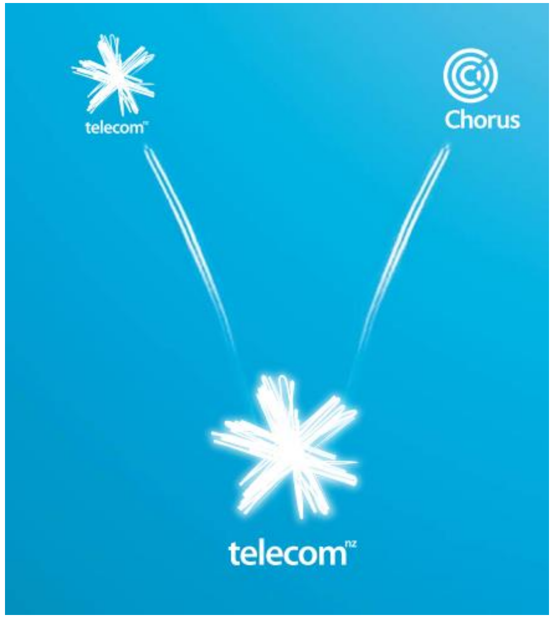
Emerging Views paper: summary of key issues

Parameters	Summary of the Commission's *Emerging Views* paper
Crown financing	Suggested there is no actual financing cost of expected $1.33 billion of Crown financing, meaning no return would be earnt on the equivalent communal assets until the financing falls due between 2025 and 2036.
WACC: 2011-2022	Suggested the fibre WACC from 2011 to 2022 could be adjusted on an annual basis, rather than applying a single WACC across the decade-long rollout period.
WACC: asset beta	Proposed an asset beta of 0.46, well below market expectations.
WACC: percentile and TAMRP	Suggested no uplift (from 50^{th} to 67^{th} percentile) required to mitigate risk of under-investment, but could consider a potential uplift for asset stranding risk. Suggested Tax-Adjusted Market Risk Premium (TAMRP) will be updated in the cost of capital calculation.
Cost of debt	Indicated risk-free rate, debt premium and debt issuance costs to be consistent with other Part 4 utilities.
Indexation	Suggested RAB indexation will apply, consistent with other Part 4 utilities.
Taxation	Allowance consistent with other Part 4 utilities, but suggested BBM tax losses in pre-implementation period cannot be brought forward.
Depreciation	Act requires straight line depreciation for initial RAB valuation, but Commission suggested non-standard depreciation (i.e. tilted) could be considered post-implementation.

UFB context: A public-private partnership

Chorus was required to split from Telecom to build the UFB network and took on extensive contractual obligations, as well as substantial project and other related risks. The “fair bet” that investors took was an expectation of a fair return reflecting these risks.

In return, New Zealanders now have access to a world-leading fibre network at reasonable cost, well ahead of when it might otherwise have been built and with limited public investment.



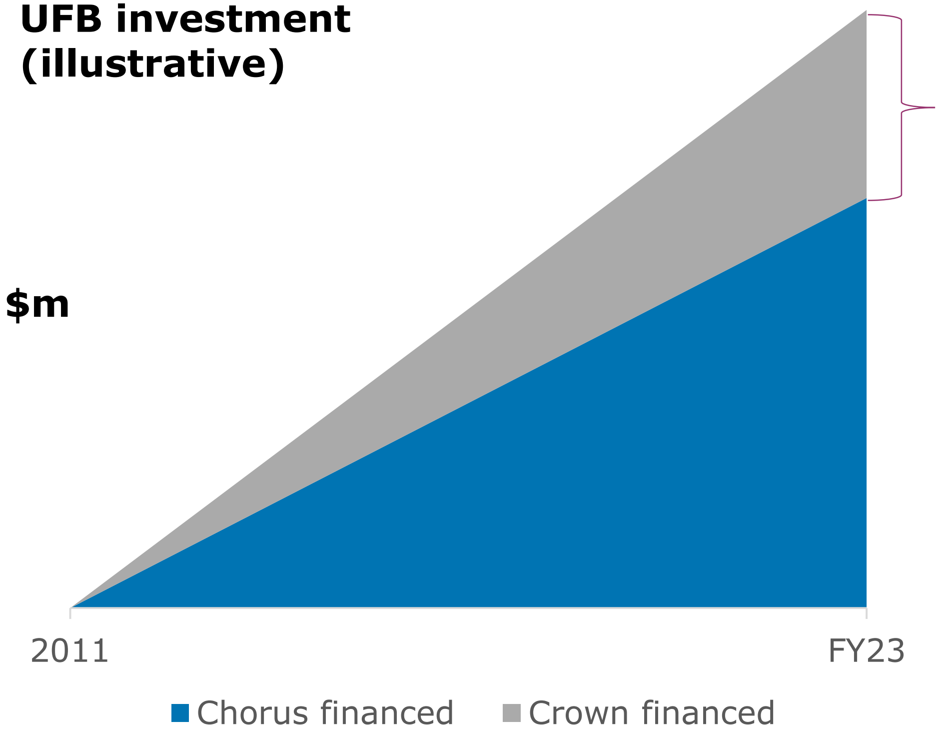
Crown contracts required:

- split of Chorus from Telecom
- Chorus to have investment grade rating (with dividend stopper if falls below)
- contracted product pricing, set by Crown to ensure initial uptake and limited for 10 years
- stringent rollout requirements, including material damages
- management step-in rights for material breach
- limitations on ongoing copper network investment

Crown financing: Chorus investors bore residual risk

The Commission's Emerging Views paper suggests there is no actual financing cost associated with Crown funding. This means Chorus would not earn any return on the fibre assets funded with Crown financing until the funding falls due from 2025 to 2036.

UFB investment (illustrative)



Crown financing was <u>not</u> free

Up to $1.33bn in Crown funding (57:43 equity/debt)

- debt repayable in 4 tranches 2025-2036 with dividends payable to the Crown proportionally on 4 equity tranches
- Chorus required to issue warrants to Crown to share in investment upside above 16% CAGR
- the requirement that Chorus maintain investment grade rating, to allow draw down of funding, placed greater risk on equity investors

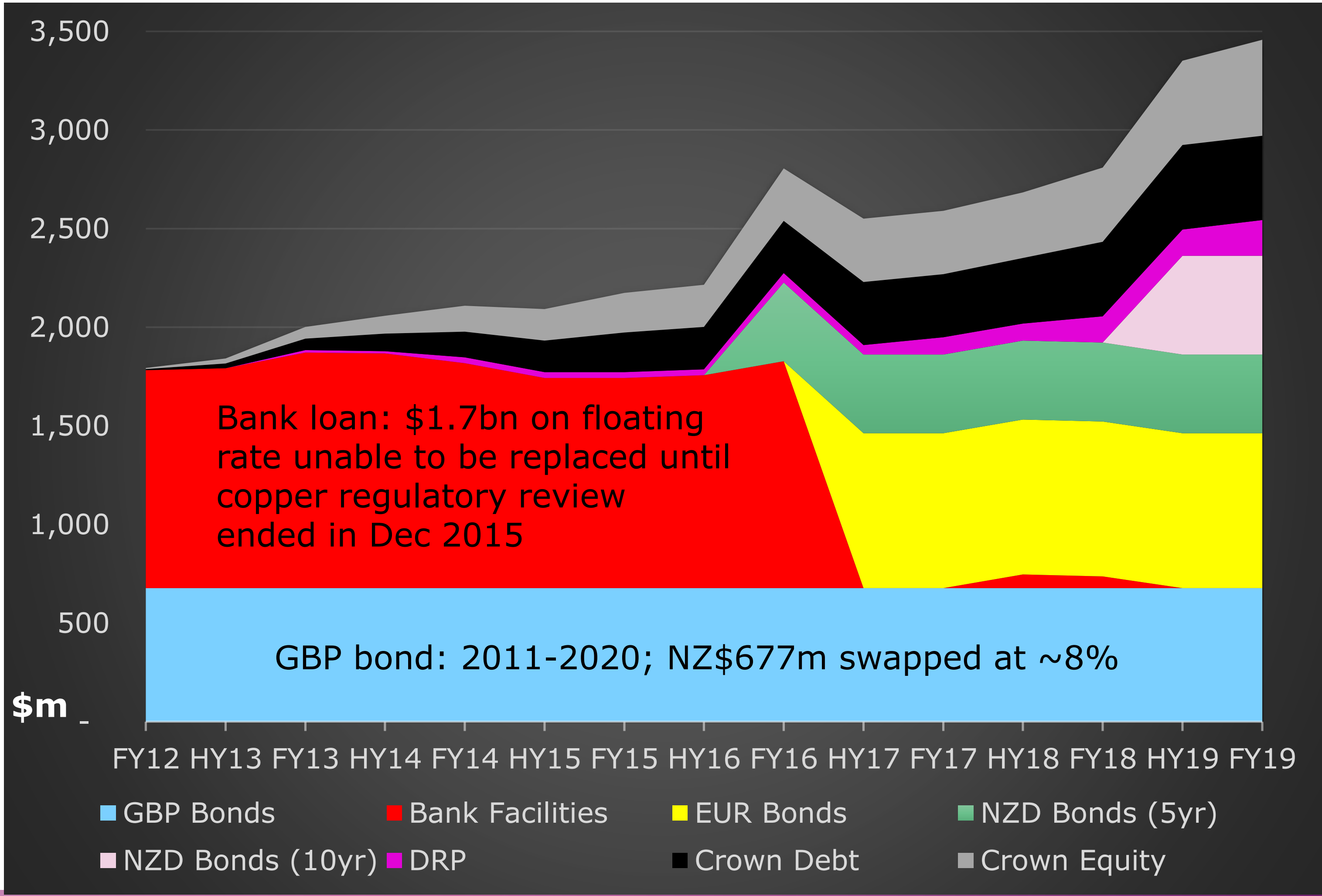
Chorus view: If there was no actual cost, why is it explicitly contemplated in the legislation? The Crown funding was equivalent to debt risk taken on by the Crown, vs the project risk and other residual risks taken on by Chorus investors. A minimum return of between 1.81% and 1.85% should be earned on this portion of the RAB - otherwise it unstitches the UFB agreement by incentivising Chorus to redeem the financing (and begin earning a full WACC) ahead of the agreed dates.

Chorus fibre rollout: sources of funding

The Commission's Emerging Views paper suggests Chorus' WACC could be retrospectively averaged on an annual basis (2011-2022).

Chorus view: A 10-year WACC period reflects the costs and risks taken on by Chorus investors and matches the 2011-2022 pricing period set by the Crown contract and legislation. Retrospective adjustments send a poor signal for future NZ infrastructure PPPs.

- **GBP bond (NZ$677 million equivalent)** with term matching UFB1 rollout period and **bank loan $1.7 billion** on floating rate were required to enable demerger
- **$1.685 billion** in Euro and NZD bonds issued to investors as rollout progressed.
- Equity investors have had limited dividends due to negative free cash flow during build period, while funding **~$180 million in equity via Dividend Reinvestment Plan**
- **Crown financing** is drawn down as rollout progressed. Debt repayable from 2025-2036; Crown equity securities attract dividends in tranches from 2025.



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WACC: Chorus investors have borne significant risks

Build risk
- Ongoing risk of project over-runs throughout build period to 2022
- Risk realised when communal costs revised upwards in 2013

Demand risk
- Investment in network and systems was ahead of demand, requiring long-term pay-offs and with no certainty of a return
- Unbundling requirement creates Layer 2 investment risk

Technology risk
- Wireless risk emerged in 2016/2017 as retailers promoted their own 4G wireless networks
- 5G networks are now being developed

Regulatory risk
- Risk realised when copper pricing review 2012-2015 resulted in Moody’s ratings downgrade, dividend suspended for two years and delay in refinancing bank debt
- UFB pricing constrained by Crown contract and legislation (e.g. anchor products, unbundling and geographic averaging)
- Post 2020 uncertainty continues to weigh on equity investors with framework implementation delayed 2 years (until January 2022) and perception of sovereign risk

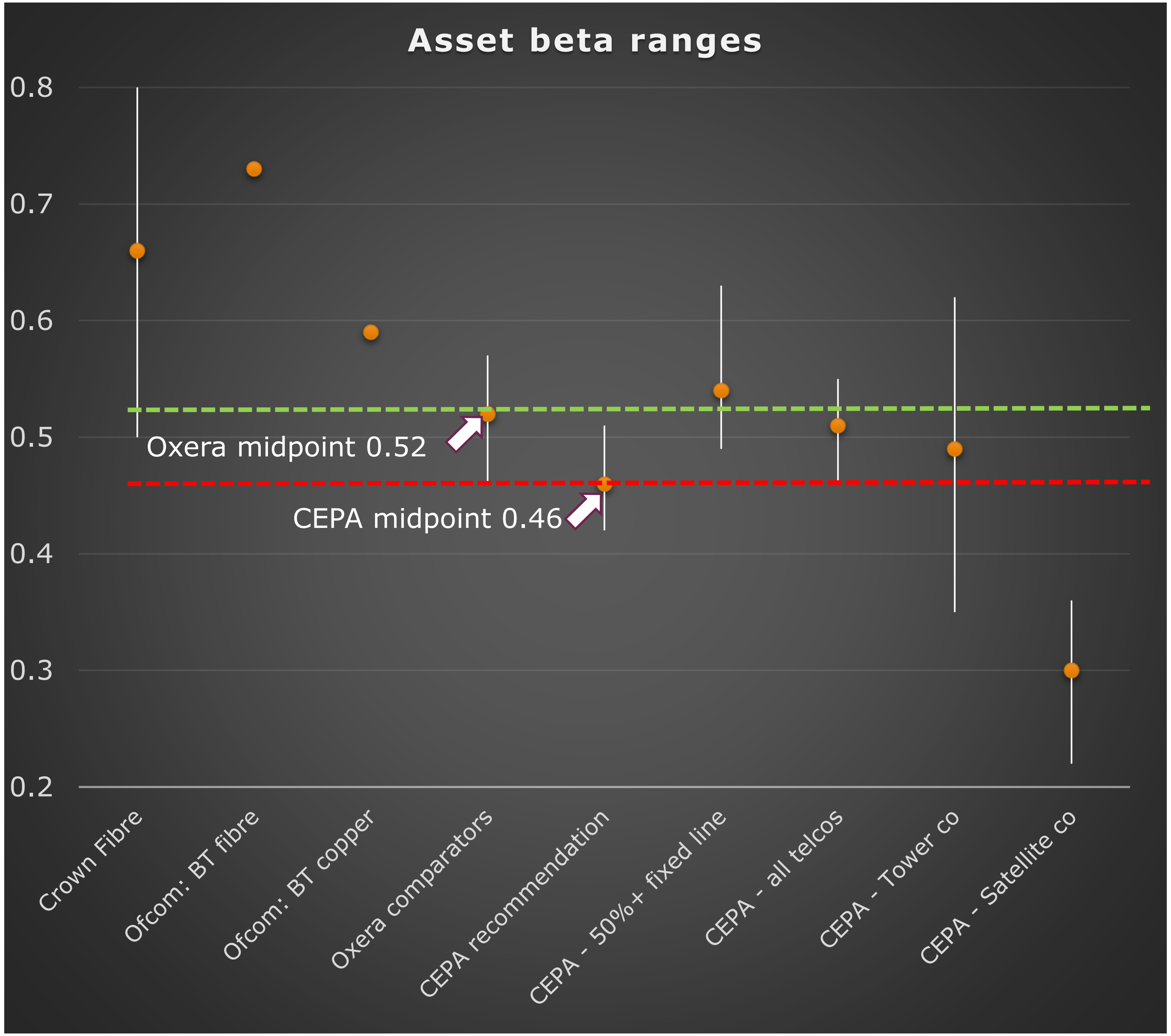
NZ Herald*: *Yes, the Ultra-Fast Broadband project was a gamble *(28 August 2019)*

WACC – asset beta

The Commission's Emerging Views paper suggested an asset beta of 0.46, reflecting a broad comparator group of companies including integrated telcos (fixed and mobile), tower and satellite operators.

Chorus view: The comparator companies used to derive the asset beta significantly underestimate the asset beta of a fibre network, particularly through the rollout period.

- Market analyst views, Crown Fibre modelling and international precedent all indicate 0.46 is too low.
- Chorus is very different from tower and satellite operators given unique wholesale-only constraints (e.g. revenue cap and anchor products).
- The Commission's experts, CEPA, indicated a higher average asset beta (range of 0.49 to 0.63) when the integrated telco comparator group was limited to companies with at least 50% of revenues derived from a fixed line network.
- Fibre businesses face higher risk than copper/legacy businesses, especially during construction and early growth phases, so asset beta for standalone fibre should be higher than the midpoint of the comparator set (Oxera midpoint 0.52). Belgium's regulator recently decided 0.71 for copper and 0.90 for fibre.



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WACC – uplift and TAMRP

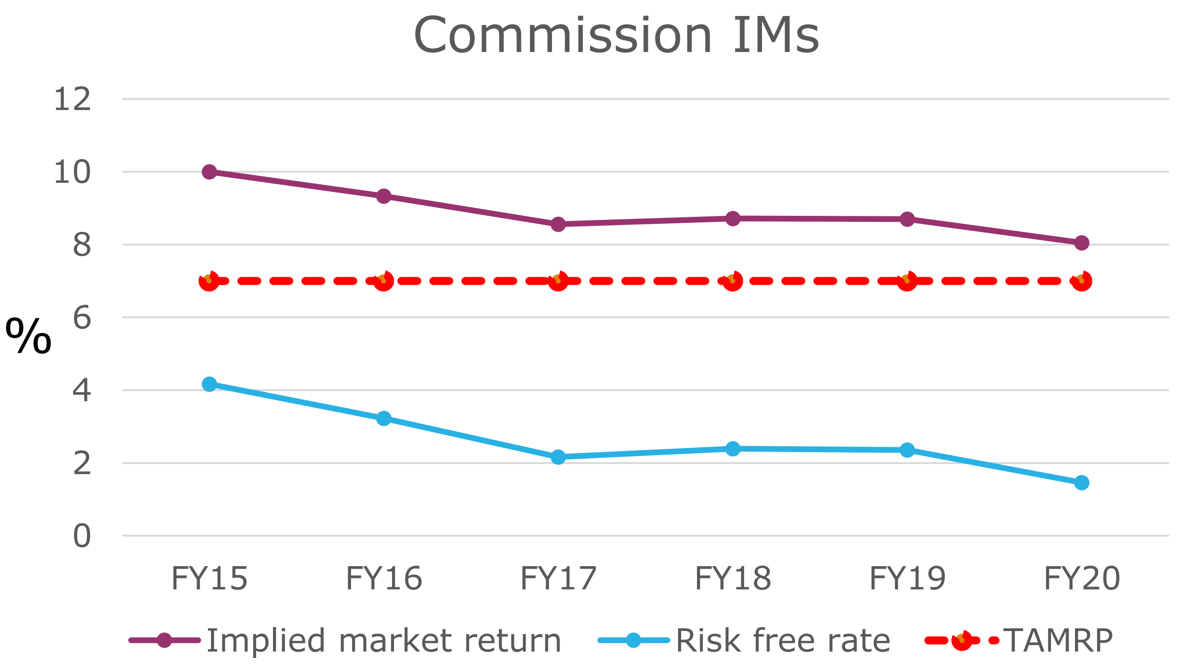
The Commission's Emerging Views paper suggested there was no basis to provide Chorus with an uplift from the 50th percentile to encourage further investment.

Chorus view: All other regulated utilities in NZ receive an uplift from the 50th percentile. An uplift is required to adjust for uncertainty in estimating the WACC and encourage ongoing investment for the benefit of consumers.

- An uplift on WACC, at least equivalent to other regulated utilities, is required to incentivise further investment in network reliability, innovation and expansion.
- Mobile networks rely on fibre backhaul and therefore do not provide an automatic back-up for consumers in the event of fixed line outages.
- Compensation for asset stranding risk could include an uplift on WACC to honour the fair bet principle (i.e. to compensate for the chance a risky investment may fail).
- European regulators have provided a risk premium of between 1% to 3.2% for fibre networks.

The Commission indicated it will review the current TAMRP of 7%.

Chorus view: The current TAMRP under estimates the cost of equity, as it has not yet been adjusted to reflect material reductions in risk free rates.



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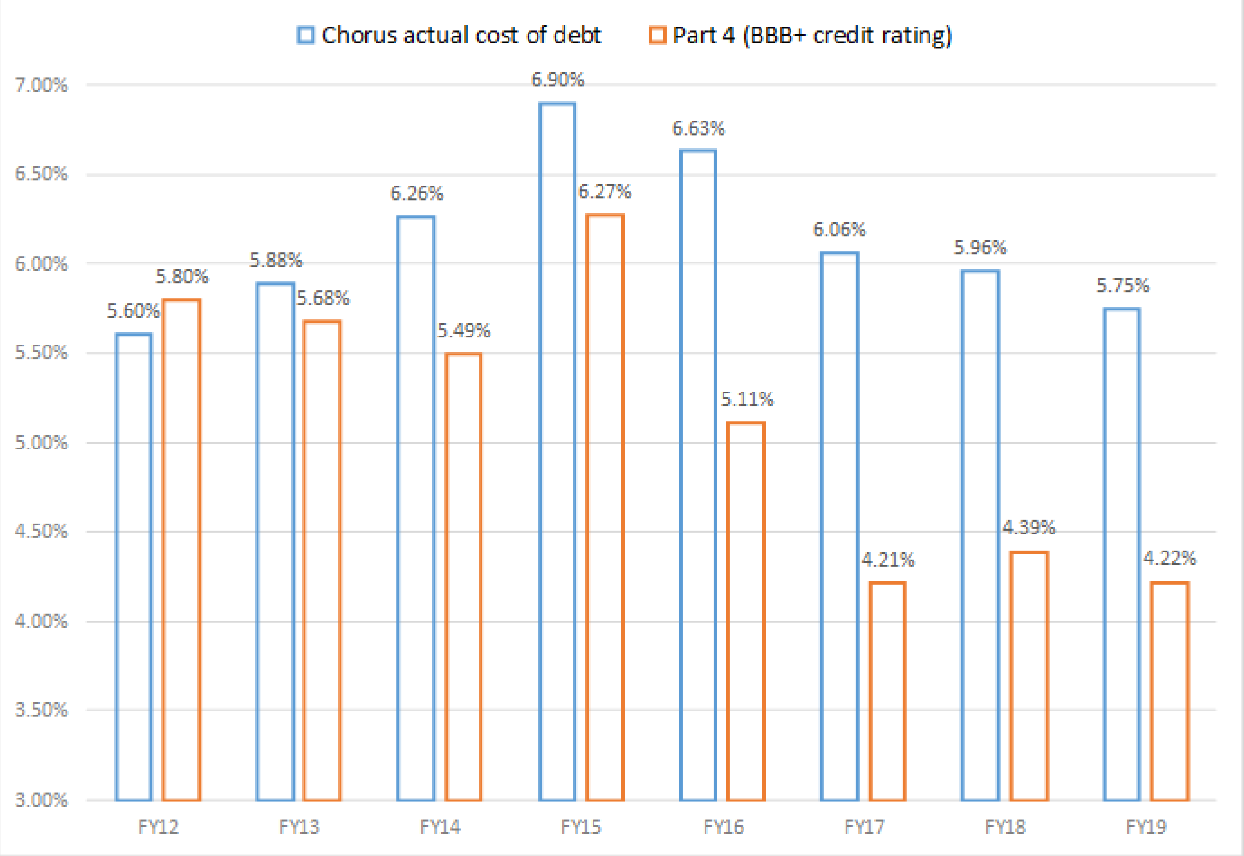
Cost of debt: leverage and credit rating

The Commission's Emerging Views paper suggested a BBB+ credit rating and notional gearing of 33% should be applied based on their comparator set.

Chorus view: Target BBB credit rating and notional gearing of 30% for a standalone fibre business would be consistent with the comparator set, and the higher risk of fibre relative to copper. The Commission should also consider whether this underestimates Chorus' actual cost of borrowing for the UFB initiative.

- Our Board's stated target credit rating since demerger has been BBB.
- The comparator set used to determine notional gearing will inevitably understate our gearing because we are in network rollout phase.
- The Commission's annual estimates for regulated utilities with a BBB+ credit rating have been consistently below Chorus' actual cost of debt (see chart). A more recent decision indicated a cost of debt at 2.92%



Tax and Indexation

Tax

The Commission proposes to assume there are no unused tax losses when calculating the unrecovered loss asset, because those tax losses could have been used by other parts of Chorus' business.

Chorus view: The proposed approach is inconsistent with prior practice for other regulated utilities, where tax was modelled in isolation from other business units.

- In addition to being inconsistent with the approach for other regulated utilities in New Zealand it is inconsistent with Australian regulators who assume tax losses are carried forward within the regulated business.
- The Emerging View requires assumptions about the tax situation of other Chorus business activities outside of the regulated fibre business.

Indexation

The Commission proposes applying indexation to the RAB, consistent with the approach applied to other regulated utilities under the Part 4 regime.

Chorus view: We support indexation because it is aligned with the principle of real financial capital maintenance and inflation risk can be significant for investors in long lived assets.

- Although indexation may affect the time profile of cost recovery, a non-standard (i.e. tilted) depreciation method could address this.
- The Commission has acknowledged that depreciation could be accelerated to respond to asset stranding risk and/or decelerated as fibre migration progresses.
- A flexible depreciation approach has previously applied to airports.

UFB initial loss methodology illustration calculation

Illustrative only

source: ***Commerce Commission***

All figures are purely illustrative

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Totals
Inputs												
WACC	10%											
Depreciation rate	5%											
Capex spend on UFB		50	100	150	200	200	200	200	200	200	200	
Government funding		30	50	70	100	100	100	100	0	0	0	
UFB revenues		0	50	100	150	200	225	230	240	260	300	
UFB opex		50	100	150	200	250	300	300	300	300	300	
Calculations												
Opening RAB		**–**	**50**	**148**	**290**	**476**	**652**	**819**	**978**	**1,129**	**1,273**	
Capex additions		50	100	150	200	200	200	200	200	200	200	
less Depreciation (GAAP)		–	3	7	15	24	33	41	49	56	64	
Closing RAB		50	148	290	476	652	819	978	1,129	1,273	1,409	
Opening government funding		**–**	**30**	**80**	**150**	**250**	**350**	**450**	**550**	**550**	**550**	
Additions		30	50	70	100	100	100	100	–	–	–	
Closing Govt funding		30	80	150	250	350	450	550	550	550	550	
Opening RAB		–	50	148	290	476	652	819	978	1,129	1,273	
less Opening government funding		–	30	80	150	250	350	450	550	550	550	
Qualifying RAB		**–**	**20**	**68**	**140**	**226**	**302**	**369**	**428**	**579**	**723**	
Return on capital (WACC x Qualifying RAB)		–	2	7	14	23	30	37	43	58	72	285
Return of capital (depreciation)		–	3	7	15	24	33	41	49	56	64	291
Opex allowance		50	100	150	200	250	300	300	300	300	300	2,250
Total BBM allowable revenue		**50**	**105**	**164**	**229**	**296**	**363**	**378**	**392**	**414**	**436**	**2,826**
less UFB revenues		–	50	100	150	200	225	230	240	260	300	1,755
Losses (ie, shortfall)		**(50)**	**(55)**	**(64)**	**(79)**	**(96)**	**(138)**	**(148)**	**(152)**	**(154)**	**(136)**	**(1,071)**
Present Values												**Total PV @ 2021**
PV losses forward to 2021		(118)	(117)	(125)	(139)	(155)	(202)	(197)	(184)	(170)	(136)	(1,542)