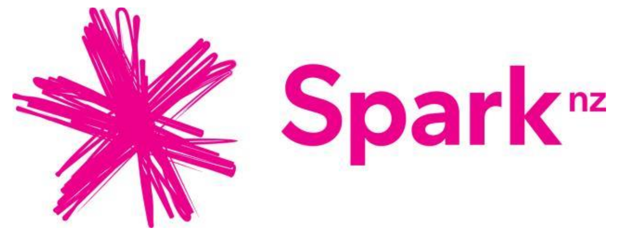


# Dr Martin Lally report: further issues concerning the cost of capital

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# Executive summary

The Commission has asked for comments on Dr Lally's May 2020 advice concerning the cost of capital for fibre input methodology past losses.

### Applying s177 of the Act

Dr Lally's report highlights the importance of identifying financial losses using the methodology set out in s177 of the Act. Dr Lally notes that financial losses comprise the ex post difference between the revenues and costs incurred by the provider in providing regulated fibre services.[1]

Dr Lally rightly rejects arguments that the pre-implementation period should be treated as a regulatory period and that losses should be determined as the difference between expected and actual cash flows. These do not reflect financial losses incurred. We also support recent Commission proposals that draw on evidence of utility firms' actual financing practice for calculating the debt premium.[2] Section 177 is not an instruction to solve for business case expectations (even if these could plausibly be identified), to underwrite the regulated providers other businesses or to apply forward looking regulatory parameters to past costs.

However, for the same s177 reasons, we have concerns at the Commission's proposed cost allocation methodologies for past financial losses likely bring into the calculation losses that are not incurred due to the provision of the regulated fibre service.

### Estimating the pre-implementation period beta

While the Commission sought further advice from Dr Lally, we still don't have a reliable approach to resolve the matter in a manner that meets the requirements of the Act. Selecting the beta is a material decision that could increase overall end-user prices by hundreds of millions of dollars.[3]

Dr Lally had earlier advised that, as firms face systematic risks within the pre-regulatory period, the beta must be above zero and therefore zero is the lower bound. Dr Lally did not present an upper bound noting only that using the same beta applied to the regulatory situation may be too high or too low. In the absence of suitable comparators, Dr lally advised that the latter is likely to produce a smaller estimation error and is therefore preferable.

However, Dr Lally provides no factual analysis supporting the example estimation error calculation – the regulatory beta itself is based on comparators that were rejected for this purpose and applying different equally plausible assumptions to the worked example would reverse the conclusion – or what other approaches or sources of information might inform Commission judgement. The proposed approach avoids considering what the beta for pre-implementation period should be.

This is not a statutory option that is available to the Commission. Rather, the Commission should consider the factual situation - i.e. taking account of actual risk relating to bringing forward past revenues and alternative approaches to estimating this risk and – and exercise its judgement to set an appropriate financial losses return. It should consider its approach further.

[1] Dr Lally, 25 May 2020, *Further issues concerning the cost of capital for fibre input methodologies* at page 3
[2] Commerce Commission, 13 August 2020, *Further consultation draft (initial value of financial loss asset)* at paras 3.10 to 3.21
[3] The Commission worked financial example - while we appreciate it uses arbitrary numbers - illustrates the significant implications for end users. The beta range results in a swing in the past losses estimate of over $200M.

## Introduction

1. Thank you for the opportunity to comment on Dr Lally's 25 May 2020 report concerning the cost of capital for fibre input methodologies (**the paper**).

2. Dr Lally responds to submissions on the cost of capital and addresses questions posed by the Commission. The report seeks to clarify the relationship of the building block model (BBM) and discounted cash flow (DCF) methods for calculating the pre-implementation accumulated losses.

3. Chorus has submitted that the staggered release of consultation papers makes it difficult to assess the full impacts across all IMs and provide a fully informed view of all the Commission's proposed changes at this time. Chorus notes that at this stage a number of key matters, and how they will be implemented in the final IMs drafting, are missing and it may need to comment further on matters already consulted on in the process.[4]

4. We agree with Chorus' concerns. While we comment on Dr Lally's advice below, we will likely address similar matters in responding to the further financial losses' consultation.

## Applying s177 of the Act

5. Dr Lally's report is a good reminder that the Commission must apply the requirements of the Act in assessing past losses. For example, Dr Lally rightly notes in response to arguments that losses should be determined as the difference between expected and actual cash flows that,

   > […] it seems clear from section 177 of the Telecommunications Act 2001 that losses are defined as the ex-post difference between revenues and costs rather than the difference between expected and actual cash flows.

6. The Commission notes in in the updated financial losses draft that the past losses' calculation was to address the fact that LFCs *were expected to incur financial losses during the UFB network's initial period of operation. This is because UFB partners made investments ahead of demand, and initial end-user uptake of UFB services and the associated revenues recovered in accordance with the UFB contracts were not sufficient to cover the fixed and/or variable costs that the UFB partners incurred during that period.*[5]

7. The UFB participants' concern that long-term investments may be impacted by future regulatory approaches was articulated and considered as early as the 2011 amendments to the Act. Officials advised the Select Committee considering UFB enabling legislation that the proposed framework would mitigate these concerns through forbearance in the short term and, the medium term, review provisions would require consideration of earlier investments.[6] The parties could have confidence when entering UFB arrangements that their investments would be recognised in to any future regulatory regime.

8. Accordingly, Section 177 recognises that Part 6 price controls are being applied part way through the life of the fibre networks and financial losses may have incurred during the initial period of operation. Recognition of the actual financial contribution/losses incurred in the pre-

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[4] Chorus, 13 August 2020, *Chorus submission on Fibre input methodologies –further consultation draft reasons paper* at page 2.

[5] Commerce Commission, 13 August 2020, *Further consultation draft initial value of financial loss asset reasons paper* at 2.4

[6] *Officials' report on the Telecommunications (TSO, Broadband, and other matters) amendment bill 1 April 2011*. Discussed at pages 14-17. https://www.parliament.nz/resource/en-NZ/49SCFE_ADV_00DBHOH_BILL10470_1_A180435/4a786161ea4c6a48f5c81c1124a2d2d46fb32b9d

implementation period and expected normal profit through future regulatory periods that supports the expected NPV=0 objective.

9. Therefore, any claims that the Commission should now set an arbitrary cost standard – for example, solving for claimed business case parameters or backward application of forward looking BBM parameters – makes little sense in the context of s177.

10. Dr Lally is right to question claims that the pre-implementation period should be treated as a regulatory period, the losses should be determined as the difference between expected and actual cash flows, and therefore the relevant risk-free rate is that prevailing at the commencement of this implementation period. Likewise, we support recent Commission proposals that the term of debt etc should be based on the actual term applied by providers. There is no fibre network in the real world and some costs must be derived. However, deriving these costs should aim to estimate fibre network costs rather than any other objective.

11. However, for the same s177 reasons, we have concerns at proposed cost allocation and double recovery mitigation methodologies that likely have the effect of bringing legacy copper assets and costs in to financial losses calculation when these are not properly incurred in the provision of the regulated fibre service. For example, proposed cost allocations will bring in costs to the financial losses calculation even though the provision of the fibre service has not resulted in additional costs being incurred. Alternatively, existing assets will likely be fully allocated to the fibre network over time to reflect diminishing use by copper-based services rather than the additional use of the network for fibre services. The approach risks the inefficiencies of the copper network being carried forward into the fibre world, an outcome the regulatory framework was specifically designed to avoid.[7]

## Estimating the pre-implementation period beta

12. We still do not have a clear view on the rate of return that should apply through the pre-implementation period.

13. The paper builds on Dr Lally's earlier 2019 report where he concluded that firms face systematic risks within the pre-regulatory period, but these risks are not identical to those faced once regulation commences.[8] Dr Lally illustrated in his earlier report that, using simplified examples, if the price or revenue caps were correctly set in the pre-regulatory period, then the appropriate rate of return in this period would be risk free.[9] However, firms face systematic risks and the set of systematic risks will expand from the commencement of regulation. Dr Lally notes that, if a revenue cap is applied, a firm will face systematic risk arising from possible stranding, opex being more or less than expected by the regulator, as well as regulatory errors in setting the price cap.[10]

14. Dr Lally concludes that[11]

> "In summary, systematic risks are present in the pre-regulatory period but differ from those once regulation commences. Therefore, properly estimating the beta in the pre-regulatory period would require identifying suitable comparators, and these are unlikely to be available. So, the choice must be between a beta estimate of zero and that for the regulatory situation. Using a beta estimate of zero would be too low whilst using the same beta applied to the

[7] The Government considered a single control across both copper and fibre networks during the initial stages of policy development, this was subsequently revised so that Part 6 would apply only to the UFB fibre networks.
[8] Dr Martin Lally, 30 April 2019, *The cost of capital for fibre network losses* at page 3
[9] Dr Lally, 2019, at pages 7-8
[10] It is unclear why price caps could be a regulatory error in our revenue cap model with washups.
[11] Dr Lally, 2019, at page 9

regulatory situation may be too high or too low. The latter is likely to produce a smaller estimation error and is therefore preferable."

15. The Commission rightly raised the question of why Dr Lally's lower bound is zero and why his upper bound is the beta applicable to the regulatory situation. Dr Lally reiterated his 2019 conclusion and responded that[12]

> In respect of the lower bound, my earlier analysis (Lally, 2019a, section 3) demonstrated that systematic risk is positive in the pre-implementation period. So, the beta must be above zero and therefore zero is the lower bound. In respect of the upper bound, I did not present one. Instead, as indicated in the quotation above, I concluded that suitable comparators are not likely to be available for estimating the beta in the pre-implementation period and the only candidate was that applicable to the regulatory situation, which might be too high or too low.

16. We do not believe that the Commission can reliably estimate the pre-implementation beta by applying Dr Lally's recommended approach, i.e. by simply adopting the subsequent regulatory period beta as the natural choice in the circumstances.

17. Dr Lally's paper sets out financial principles relating to the issue and observes that suitable comparators are unlikely to be available (in order to apply the Commission's benchmarking methodology). However, the paper doesn't:

    a. Consider what other information and options are available to the Commission so that it might determine the appropriate return on past losses (given the preferred benchmarking approach is not be feasible).

    b. Explore the factual context within which the required rate of return is being estimated to inform the decision and how the Commission might exercise its judgement within the factual situation, or

    c. Fully consider why simply adopting the regulated period beta is more reliable than alternative methodologies or Commission exercising its judgement in light of the evidence available to it.

18. These are all matters the Commission should turn its mind to.

19. Further, while there may not be sufficient comparators to apply the benchmarking methodology, it remains unclear that adopting the beta for the subsequent regulatory period is consistent with the requirements of the Act. For example, Dr Lally advises that the difficulty of locating suitable comparators meant "the choice must be between a beta of zero and that for the regulatory situation. Using a beta of zero would be too low whilst using the same beta applied to the regulatory situation may be too high or too low. The latter is preferable because the error from doing so is likely to be much smaller."[13]

20. However, there is no information to suggest that the regulatory situation – which itself is based on comparators discarded as an acceptable approach for the past losses period – is a reliable estimate of past losses risk. Further, the worked example only demonstrates that, under a certain set of assumptions,[14] adopting the regulatory period beta estimate for the pre-regulatory period has a lower root mean squared error (**RMSE**) than assuming a zero beta. Given the RMSE result is assumption driven, different assumptions reverse the result, i.e. if the true beta for the pre-regulatory period was equally likely to be 0.1 and 0.3, then the RMSE for the options

[12] Dr Lally, 2020, at page 18
[13] Dr Lally, 2019, at pages 8 and 9.
[14] Dr Lally, 2019, at page 9. Assuming the true beta applicable to the regulatory situation is 0.4 whilst that applicable to the pre-regulatory period is equally likely to be 0.2 or 0.6.

would be equal. If the true beta for the pre-regulatory period was more likely to be 0.1 (say 51% likely), then the risk-free based estimate would have the lowest error. The RMSE approach relies on knowledge of the likely pre-implementation period beta to suggest an approach, yet this is the information we lack in the first place.

21. We also have reservations about an approach where extreme positions are taken at the end of ranges to avoid considering complex regulatory issues and uncertainty:

    a. The Commission would risk, by adopting either end of the range, failing to undertake proper inquiry and consider information that would otherwise be available to it to inform a decision. Dr Lally notes that estimating the appropriate beta for a situation involves locating suitable comparators and this is likely to be impossible for the pre-regulatory situation. However, while the Commission's Part 4 based benchmarking approach may not be available there are other approaches and information available to it that could be used to estimate the pre-implementation beta. These options have not been considered and may well provide a more reliable estimate than the extreme position proposed.

    b. The approach inevitably loads the costs of avoided regulatory decision making on to one party. For example, the Commission simply adopting the regulatory beta for past losses is likely to be equally as flawed an approach for end users as the Commission simply adopting the risk-free rate is suggested to be for Chorus. Vodafone has already set out its concern that the Draft Decision moved the balance heavily in favour of the LFCs and a number of concessions were made that in sum result in a significant bias.[15]

22. The Commission rightly asked for further reasoning as to why the range's lower bound may be zero and upper bound may be the beta applied to the regulatory situation. However, the only guidance we have is that:

    a. The pre-regulatory period risk is different to the regulatory period and that, from the commencement of regulation, the set of systematic risks that the firm will face will expand.[16]

    b. The pre-regulatory period past losses beta exceeds the theoretical risk-free rate (i.e. zero) and may be higher or lower than the beta for the regulatory period, and

    c. There are unlikely to be sufficient comparators available to apply the Commission's usual benchmark methodology to estimating beta.

23. Accordingly, at this stage the Commission has no reliable basis on which it could determine the beta for pre-implementation period. This is an important issue as, with the proposed approach, the rate applied return will have significant implications for estimated financial losses and ongoing end user prices. For example, applying the Lally beta range to the indicative Commission financial loss spreadsheet increases the financial loss estimate by over $200M.[17] These additional costs will increase end users' prices.

24. We believe that, to find a viable approach, the Commission should consider other approaches and sources of information available to it to inform its decision and exercise its judgement in

[15] Vodafone, 28 January 2020, *Submission on Fibre Regulation Draft Decision* at page 2.
[16] Dr Lally, 2019, at page 8
[17] The Commission indicative financial losses DCF model. We appreciate the model inputs are illustrative only, however it is illustrative of the significant impact the selected beta will have on the financial losses estimate.

selecting the best estimate of the required rate of return for the pre-regulatory period. For example, Commission should consider:

a. Approaches for quantifying the risk and return relating to past losses. For example, by directly estimating a risk adjustment above the risk-free rate or value at risk relating to future recovery of the asset. The Commission could consider whether the MRP error risk identified by Dr Lally[18] is evident in this case and the implications of this risk on the financial losses asset value.

b. A cross check on any results by, for example,

    i. Reference to direct comparator firms that display similar financial attributes to past loss calculated revenues. Dr Lally notes that comparators for benchmarking may not be available. However, the Commission could look to firms with long dated customer contracts to test the results or pure rate of return regulated firms, i.e. where risks relate to those around steady and (close to) certain cashflows rather than the sector within which they operate.

    These estimates are likely the top of the range for past losses. For example, Crown Castle is characterised by long term contracts (5 year weighted average remaining term)[19] and could sanity test results (as the highest plausible). If a beta were required, this suggests it would likely fall below 0.25.

    ii. The rates and risk associated with government backed bonds as an indicator of guaranteed returns to a government backed provider.

    iii. Chorus observed RAB multiple as an indicator of whether taking a conservative (low) approach to assessing past losses risk is likely to have any negative consequences for consumers. This is the approach taken in the Commission amendment to the WACC percentile reasons paper.[20]

**[End]**

[18] Dr Lally, 2019, at page 8

[19] Crown Castle investor presentation https://investor.crowncastle.com/static-files/e2d9530c-7a09-4247-8e63-449ea2bc3926

[20] Commerce Commission, 30 October 2014, *Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services Reasons paper* at 6.34-6.36