Telecom Corporation of New Zealand Limited

Cross-submission on Commerce Commission's technical consultation paper:

Determining the cost of capital for the UCLL and UBA price reviews, 7 March 2014

Cross-submission

11 April 2014

pwc

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Introduction

Scope of Report

1.   The purpose of this report is to provide our cross-submission comments in response to the submissions (the Submissions) that have been made on the Commerce Commission's (the Commission's) Technical Consultation Paper entitled "Determining the cost of capital for the UCLL and UBA price reviews", dated 7 March 2014 (the Paper). We have also had regard to the Commission's Paper "Further work on the cost of capital input methodologies, process update and invitation to provide evidence on the WACC percentile", dated 31 March 2014 (the WACC IM Paper).

2.   This report has been prepared by PricewaterhouseCoopers (PwC) on behalf of Telecom Corporation of New Zealand Limited (Telecom).

3.   The focus of this report is on the contents of the Submissions as they relate to the approach to estimating the cost of capital for the UCLL and UBA price reviews and proposed parameter values or ranges. It is not intended to provide a full and comprehensive analysis of all matters pertaining to the estimation of the regulatory cost of capital or to provide our own specific parameter estimates.

4.   Our position and reasoning on the various issues that arise in deriving a regulatory cost of capital is already well documented in various reports we have previously provided to clients and in submissions we have made to the Commission.

Background Knowledge

5.   Cost of capital theory is a specialist technical subject. It is not the purpose of this report to provide a detailed discussion on the theory underpinning the Weighted Average Cost of Capital (WACC) and its components. In presenting our comments, we have assumed that readers of this report have a basic understanding of the theory underpinning WACC and how WACC and its components are derived.

6.   Furthermore, we have assumed readers are familiar with the contents of the various reports and papers released by the Commission on the cost of capital for regulated industries and our submissions on the same.

Disclaimers

7.   Our report has been prepared to assist Telecom in its submission to the Commission in relation to the regulatory cost of capital that might apply to setting the prices for services that affect Telecom.

8.   We accept no responsibility to any other party other than Telecom to whom our report is addressed and, except that the report can be submitted for consideration by the Commission, unless specifically stated to the contrary by us in writing, it should not be copied to any third party without our prior, written permission. We accept no responsibility for any reliance that may be placed on our report should it be used for any purpose other than stated above.

9.   We reserve the right, but will be under no obligation, to revise or amend our report and the opinions contained therein if any additional information, which was in existence on the date of this report but was not brought to our attention in preparing our report, subsequently comes to light.

10.   The primary contacts for this submission are: Murray Coppersmith, Partner, PricewaterhouseCoopers, murray.coppersmith@nz.pwc.com; John Redmayne, Director, PricewaterhouseCoopers, john.redmayne@nz.pwc.com.

Proposed Approach

Overall Approach

11.   The Submissions are generally supportive of using the Commission's existing Cost of Capital Input Methodologies (WACC IMs or IMs) as the framework for assessing the regulatory WACC for the UCLL and UBA price reviews. However, we reiterate our earlier comment that the Commission should always remain open to considering other methodological frameworks when developing regulatory WACC estimates for newly regulated activities. For example, differences in wording, purpose and intent of different parts of the Commerce Act may sometimes warrant different approaches as may the particular characteristics of an activity or industry.

12.   We understand that the Commission is seeking independent expert advice on industry-specific WACC parameter estimates for the UCLL and UBA price reviews. It would be helpful to interested parties if this advice is released as soon as it is available, in order to allow sufficient time for meaningful analysis (i.e. release this advice prior to issuing the draft determination).

Methodological Issues Raised

13.   Chorus' adviser, CEG, has raised cost of capital methodological issues regarding estimation of the debt risk premium (DRP) and the tax adjusted market risk premium (TAMRP). We comment on these issues below.

Debt Premium Estimation Methodology

14.   CEG is proposing that the cost of debt for use in the UCLL WACC be estimated subject to two modifications to the existing IM framework:

- The DRP sampling methodology be extended to include bonds from 'qualifying' New Zealand issuers that are denominated in foreign currency; and

- The DRP be based on a debt term of 10 years, implemented either as a rolling 10 year average or under a modified TCSD adjustment, which allows for a swap overlay.

15.   On the first point, we concur in principle with expanding the sample size. However, with the data presented in CEG's analysis there appears to be a significant difference between the DRPs for local currency versus foreign currency bonds. There is no analysis or explanation of this difference, which may arise from differences in factors such as liquidity and withholding tax treatments in different markets and / or in how currency conversion has been dealt with. In the absence of such analysis this suggests that some caution is warranted before placing much, if any, reliance on the foreign currency bond data points.

16.   On the second point, we concur in principle that the DRP should be based on a prudent borrowing term, which in this case CEG assesses as 10 years. We note that while New Zealand infrastructure-type companies might prefer to issue debt for a term of 10 or more years, the New Zealand debt market currently does not show much depth in outstanding maturities beyond seven to eight years. As a pragmatic matter, in order to obtain sufficient sample size for DRP estimation purposes, it may be necessary to cap the assumed debt term at this range of maturities.

Tax Adjusted Market Risk Premium

17.   CEG is of the view that to maintain consistency with use of a current risk free rate a current, forward looking TAMRP estimate should be used. It also notes that to the extent the Commission's TAMRP estimate from the IMs incorporates forward looking TAMRP analysis, that forward looking analysis is now outdated.

18.   We concur with CEG on both of these points. Although in practise we consider it appropriate for the Commission to have regard to both backward and forward looking TAMRP analysis. However, the forward looking TAMRP analysis from the IMs is now clearly dated (and in fact some of it was already dated at the time of the IMs).

Parameter Estimation

Industry Specific Parameters

19.   CEG, on behalf of Chorus, has undertaken analysis of industry specific parameter estimates for the UCLL WACC in respect of:

- Asset beta;

- Leverage; and

- Credit rating.

20.   As we have previously noted, from a technical perspective, there should be consistency between the assumptions regarding leverage and the long term credit rating. Furthermore, it is preferable that there is some consistency between the sample of comparable firms used to analyse these parameters and the sample used to estimate the asset beta. CEG's analysis seeks to use the same group of comparator companies in its analysis, subject to data availability.

21.   CEG includes Chorus in its sample. This is appropriate insofar as Chorus can be considered a reasonable comparator to the UCLL activities. However, Chorus should not be given any undue weight in the analysis and indeed should be disregarded if it is an outlier in any dimension.

22.   We comment on each of CEG's parameter estimates below.

Asset Beta

23.   To assess industry specific cost of capital parameters for the provision of UCLL services CEG has selected a sample of companies that own and operate fixed line telecommunications businesses in certain countries. It is not stated why these particular countries were selected while other countries or regions (e.g. Asia, Canada, South America etc.) do not appear to have been examined.

24.   CEG then screened its initial sample based on descriptive criteria of the firms' business activities. Ideally, the screening would have been based on quantification of the extent of 'wireline' activities, although this would step would require more resources to implement.

25.   As CEG observes many of the companies in the comparator group, including Chorus, are involved in a range of telecommunications related activities other than pure 'wireline' or UCLL-type activities. These activities include retail, mobile and fibre roll-out projects. From a technical perspective, the preferred approach to extracting a pure 'wireline' asset beta estimate from a sample of companies that are also involved in other activities is to undertake a beta decomposition analysis for each company in the sample.

26.   Asset beta estimates are derived from equity beta estimates, which in turn are derived from analysis of company share and stock market index returns. It is well known that equity beta estimates can be sensitive to factors such as:

- The choice of stock market index. A broader index is to be preferred. CEG has not provided any information on the indices used in its analysis;

- Thin trading in the shares of the company for which a beta is being measured. CEG has not stated what diagnostics, if any, it has undertaken in this regard;

- The interval chosen for measuring returns (e.g. daily, weekly or monthly) and the starting time for the analysis (e.g. which week day is selected when analysing weekly returns etc.). CEG has used daily returns in its analysis, but noted that it was working under time constraints. When undertaking in depth beta analysis our preference is generally to use monthly returns and, if

warranted, to control for the effect of the choice of starting date by re-doing the analysis using a range of different starting dates during the month and then averaging the results; and

- The overall period over which the betas are measured. It is known that in times of market turmoil observed betas can behave oddly. For this reason, such periods are sometimes either excluded or given less weight in the beta analysis. We note that CEG has used four non-overlapping periods of five years in its analysis – encompassing a 20 year period from 14 March 1994 to 13 March 2014. This period includes the internet company driven US stock market boom and subsequent 'tech wreck' stock market bust in 2000 and the Global Financial Crisis that occurred over 2007-2008. In the absence of more detailed econometric analysis, this suggests that beta data from these earlier periods should be accorded less weight. In this case this would suggest that most weight should be placed on the betas measured over the five year period to March 2014.

27. The mean asset beta for CEG's sample over the latest five year period is 0.47, the inter-quartile range (25th to 75th) is 0.33 to 0.51 and the mode is 0.38. Prima facie these averages and ranges provide the starting point for assessing a UCLL asset beta. Any adjustments away from these figures should be objective, specifically quantified, theoretically sound and empirically supported.

28. Having assessed asset betas for its full sample of 27 companies (average presented by CEG as 0.58), CEG also examined the average asset beta for a sub-sample of seven companies that it assessed as being mainly involved in providing fixed line services (average presented by CEG as 0.66). It also focussed on the asset beta for BT Group (0.76), on the grounds that it was the best comparator to Chorus.

29. Due to the high level of estimation error around a single company's beta, the beta analysis should always be based on a group of comparable firms, rather than relying on direct observations of the regulated firm's own beta. This is even more important if that firm's historical share price has been materially affected by firm-specific issues. Accordingly we do not consider that any special weight should be given to Chorus' own beta. Moreover, the fact that Chorus is undertaking major fibre building / development projects that may make part of its activities similar to those of a construction company may mean its own beta is not directly relevant to assessing the beta of a hypothetical firm providing UCLL services.

30. Similarly, we do not consider that extra weight should be accorded to BT Group's asset beta. We note that BT Group's average asset beta over the 20 year period examined by CEG (0.76) is inflated by virtue of the higher asset beta in the first half of that period (0.94) versus the second half (0.58). We note that BT Group's asset beta over the last ten years, of 0.58, is the same as CEG's assessed average asset beta for its full sample.

31. CEG's approach to assessing the asset beta for a 'wireline' only business, based on a sub-sample of seven companies, is relatively simplistic. The CEG analysis infers that a wireline asset beta is greater than that of an integrated telecommunications company. In turn this infers that the asset beta of the other activities of those integrated telecommunications companies is lower than for their 'wireline' activities. Insufficient analysis has been provided to be able to determine whether or not this is a reasonable proposition. To be able to more properly address this question and to extract full information on lines of business betas a beta decomposition analysis would be required.

32. We recommend that the Commission check the standard error of its final UCLL beta estimate, to see whether or not the existing IM allowance for beta measurement error is going to be appropriate. If not then this component of the IM WACC standard error estimation should be reviewed.

Leverage

33. The mean leverage for CEG's sample is 35% (Colt Group negative leverage treated as nil), the inter-quartile range (25th to 75th) is 22% to 48% and the mode is 31%.

34. As per our discussion above on asset beta, we do not consider that any particular weight should be attached to the actual leverage of Chorus or BT Group.

35.   We note that in Table 4 of its report CEG gives BT Group's leverage over the last five years as 45% but in Table 5 it is given as 38%. The reason for this discrepancy is not explained in the report.

Credit Rating

36.   The mean credit rating for the companies in CEG's sample is BBB-. The mode credit rating for these comparator companies sits at the mid-point between BBB- and BBB. The inter-quartile rating range for the sample is BB to BBB+.

37.   Concluding on a credit rating of BBB-, as CEG has done, would be supported by the data. However, as a pragmatic matter we note that there are currently (and usually) more BBB bonds than BBB- bonds actively quoted in the New Zealand market for use in the DRP analysis.

Selection of WACC within Range

Tailored Approach to Modelling Loss Function

38. The Commission is currently consulting separately on whether or not to amend its selection of the WACC percentile under the WACC IMs, this issue will still need to be addressed in the context of the UCLL and UBA price reviews.

39. We do not provide any analysis here on this issue, but note that the 'loss function' analytical framework proposed by Dobbs for evaluating this issue would allow for industry or service specific input estimates, including for example in respect of growth rates, price elasticity of demand , fixed and variable cost structures, depreciation rates etc.

40. Given that treatment of the above factors may vary across industries and services, it may be reasonable for different percentile points within assessed WACC ranges to be applicable in different circumstances.

Asymmetric Risks

41. Chorus' advisers, CEG and Professor Grundy, have raised a number of asymmetric risks that are not incorporated in a conventional WACC assessment. Nor are these covered by the "loss function" based justification for selection of a WACC within an assessed range. We concur that there may be grounds for adjusting the regulatory WACC for such risks. However, we note that these should be assessed from the perspective of a notional investor providing the regulated services as opposed to Chorus' own particular circumstances. We also note that during the IM process the Commission acknowledged the existence of asymmetric risk but that its position then was that it was up to the regulated companies to provide the empirical evidence to quantify these risks.