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Dear Keston

Input Methodology Review: Cost of capital cross-submission

Introduction

Thank you for the opportunity to make a cross-submission in the Input Methodology review (**IM Review**) process. We appreciate the Commerce Commission's (**Commission**) engagement to date on the IM Review, and refer you to our submission dated 4 August 2016 (**Contact's IM submission**).

Cross-submission – key themes

Overall, we are concerned by submitters' comments that support a conclusion which would result in consumers paying more for regulated services than would be expected if normal returns were being earned from the provision of these services in a competitive market. We do not think consumers should pay higher charges due to the use of historic rather than forecast efficient debt costs, and do not agree that super-profits from transactions are not a concern to consumers and/or the Commission. New Zealand consumers should expect to pay costs that reflect what an efficient and best practice organisation would require in order to make normal profits. Any additional value from leveraging this privileged monopoly position should find its way back to consumers through lower prices. A revenue allowance that enables efficient organisations to extract sustained excess returns from the regulated asset base (**RAB**) is not in line with Section 52(A)(1) of the Commerce Act 1986.

We respond to submitters' views below. These responses are in three sections: cost of debt; cost of equity; and price/RAB multiple.

1 Cost of debt

1.1 General issues/comments

Contact has the following general comments in response to the submissions on cost of debt:

- Many of the submissions appear to be primarily focused on analysis of data samples and observed parameters, without providing any expert comment on whether these outputs reflect market best practice that would be expected of a hypothetical efficient, prudent issuer in a workably competitive market.
- The Commission cites in its Topic paper 4 para 30 that "the cost of capital IM is used to produce estimates of the cost of capital for regulated services on a forward-looking basis". Therefore, historical data should only be used where it is a reasonable indicator of likely future values for the hypothetical efficient issuer. Several of the submissions contain arguments which breach this principle e.g.: when data is sourced from a time frame that precedes the GFC or immediately post-GFC; or when costings are provided that do not take into account the new

FMCA regulatory regime that an efficient, prudent issuer would take advantage of for issuing its bonds.

- The analysis of debt parameters in a number of submissions is done on a weighted average basis. Given the disproportionate size of Transpower, with a debt portfolio equal to about a third that of all the regulated electricity distribution businesses (**EDB**) combined, and a few of the larger EDBs, this distorts the analysis outputs to the point where they are not appropriate for almost all the other regulated entities in the cohort. We strongly suggest analysis is done, in line with the Commission's general approach, on the basis of a hypothetical efficient, prudent regulated entity. Smaller EDBs are likely to still benefit from this assumption as they will likely access cheaper bank debt facilities rather than issue bonds (though we note that in the current FMCA regime, issue sizes of $50 million would still be very economical and efficient).
- First State Investments (**FSI**) claims in its submission[1] that it was "able to secure competitive lending terms through its strong relationships with lenders, as well as the benefits of the combined business of Vector Gas and the Maui pipeline. This contributes to the premium paid above RAB." This is in conflict with the efficient market hypothesis which underpins the WACC methodology. Contact contends that *all* regulated utility companies would/should have "strong relationships with lenders" and that they would *all* seek competitive tension in their funding pricing. Being part of a larger group is not necessarily a means whereby super-competitive pricing can be achieved, as borrowers can come into grouping/counterparty exposure limit issues with its lenders. We see no unique advantage for accessing funding for FSI, and rather would expect FSI's level of funding cost to represent the efficient firm. Consumers should not bear the costs of other regulated entities' higher funding costs, if they do exist.

1.2 Tenor

Regulated entities are viewed by investors as being akin to a perpetual bond with *5 yearly regulatory resets*, whereby the investors are guaranteed a return over and above the risk free rate (RFR). To use any timeframe other than a 5 year tenor when selecting the WACC inputs would be inconsistent with this fundamental principle. Contact, therefore, strongly believes the relevant tenor for determining the cost of debt should be 5 years to align with the regulatory period.

We note HoustonKemp, in its February report for Powerco, uses an assumed tenor of 5 years as the basis for its calculations "consistent with the assumed debt financing structure of EDBs and DPBs."[2]

However, a number of the submissions recommend, based on confidential survey data, a much longer tenor, generally around 10 years.

We make the following comments in relation to these arguments:

- The survey data on which a number of assertions were based is confidential and therefore cannot be scrutinised to assess validity of methodology, calculations, inputs, sample set etc.
- Analysis of the latest financial statements that are available for EDBs shows the debt portfolios are made up of a variety of instruments, some of which are no longer used in today's market (for example, Powerco's funding portfolio includes $50m "guaranteed" 12 year bonds and Vector's funding portfolio includes $910m "credit wrapped" bonds with 10-15 year tenors.

[1] First State Submission on IM review draft decision – Cost of Capital – 4 August 2016, p 7; http://www.comcom.govt.nz/dmsdocument/14540.
[2] Comment on the Commerce Commissions cost of capital update paper, A report for Powerco, 5 February 2016.

These instruments are no longer appropriate in today's market, have not been issued by a New Zealand corporate since the GFC and are unlikely to be issued in the foreseeable future).

- In fact, all bonds issued pre-GFC are not appropriate to include in data set as market conditions are not comparable.
- While a minority of regulated entities may issue longer tenor bonds, they also fund via short term bank facilities and issuance of short term bonds. In 2014, Auckland International Airport Ltd issued a 3 year bond and just this month, Powerco executed a 3.5 year $100m bond issuance in the New Zealand market.
- We note the "weighting" of data, which Contact considers to be inappropriate (particularly given the predominance of Transpower and a few EDBs). Rather, we agree with the Commission's general approach that the inputs should be determined from the hypothetical, prudent issuer of domestic, 5 year retail NZD bonds.
- We note Wellington Electricity argues for a 10 year tenor for parameter inputs and, in doing so, seeks to refute the Commission's argument that 10 year bond yields are likely to be higher than 5 year bond yields. However, we concur with the Commission, that longer term bond yields tend to be higher – this is supported by market evidence (10 year government bond yields have been higher than 5 year government bond yields for about 77% of the time since the introduction of the current monetary policy regime in March 1999, with the differential averaging +0.27% over that entire timeframe, and averaging +0.44% over the periods during that timeframe where there was a positive yield curve slope).

Many of the arguments for longer tenor are based on urging the Commission to set its methodology to reflect actual debt management practice of a few entities. Contact agrees with the Commission that cost of debt parameters should be set based on a hypothetical, efficient prudent issuer of 5 year domestic retail bonds, which does not necessarily reflect market practice. This principle aligns with that stated by HoustonKemp in its discussion of debt issuance costs:[3]

> *"Suppliers are free to adopt financing practices that are different from those assumed by the Commission…"*

1.3 Trailing average cost of debt (TACD) v prevailing rate on the day (ROTD)

A number of the submissions argue strongly for a trailing average rate for determining the cost of debt inputs on the basis that:

- The effect of interest rate movements would be smoothed and therefore prices to consumers are likely to be less volatile over time.
- The allowance for cost of debt under the WACC process would be more easily and more perfectly replicated by the regulated entities, thereby better meeting the Part 4 objective of NPV=0. As the hypothetical efficient issuer could perfectly hedge by issuing debt in line with the trailing average calculation, the swap cost input is able to be removed.
- In contrast to the Commission's opinion, a TACD would enhance the incentives for investment because the cost of debt mismatches can be eliminated, thereby providing greater certainty that costs can be recovered.
- The experience in Australia shows that the cost and complexity of implementing and maintaining a trailing average approach is not material, and is outweighed by the above-mentioned benefits

[3] Issues raised by the Commerce Commission's draft decision on cost of capital, A report for Powerco, 3 August 2016.

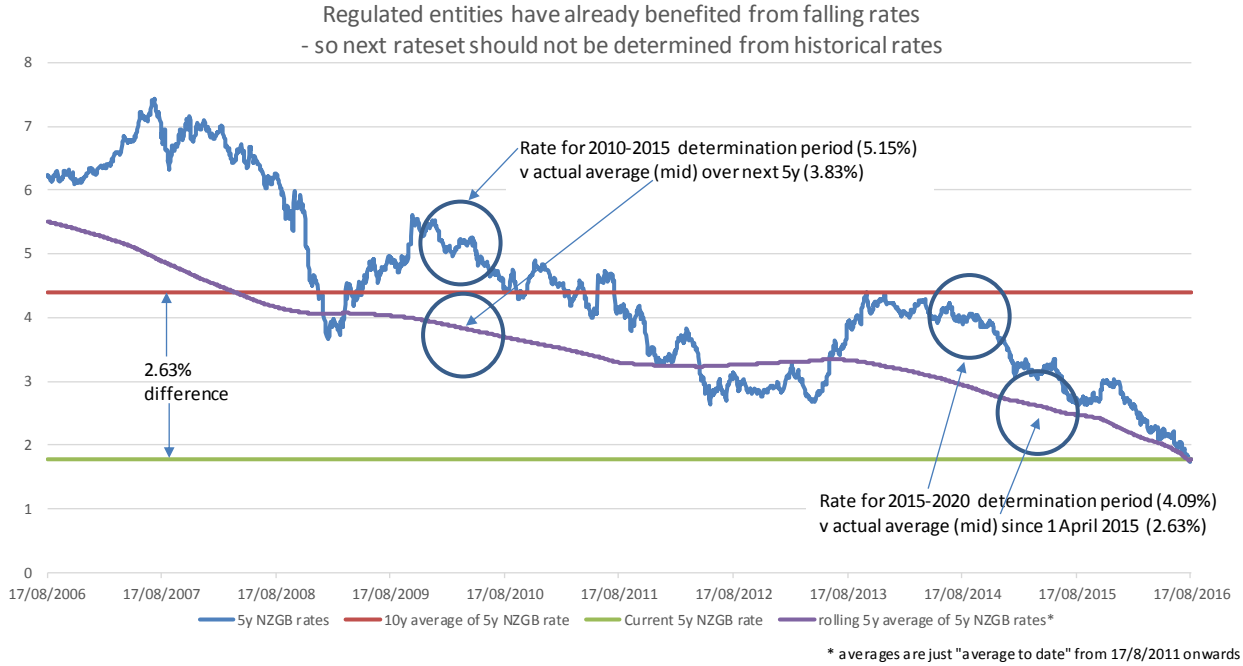
- Vector[4] noted that "a trailing average for the cost of debt …would largely negate the need for a TCSD" (presumably because the hypothetical efficient, prudent issuer would issue debt with a proportion, tenor and timing that matched the trailing average calculation).

While the theory and principles noted in Section 1.2 above would suggest a ROTD approach is most appropriate, and this is the approach suggested by the Commission, Contact has some sympathy with the above arguments if they can be shown to lower costs to consumers. We do not see any material drawbacks from a TACD approach, as long as it is correctly structured. Namely:

- Inputs should be based on a tenor that is aligned with the 5 year WACC regulatory periods, in line with the principle outlined above. We are strongly opposed to anything other than a 5 year tenor being used;
- It should NOT bring in historical data from previous regulatory periods at the outset. Rather, the TACD should be forward looking, in line with the Commission's general principle noted above, and be determined from today's rates, then adjusted by 20% each year going forward based on the rates that are prevailing in those future periods at the time of the annual update; and
- Swap costs and TCSD should be removed.

If historical rates are pulled in from previous regulatory periods, this will cause a significant upwards distortion on the cost of debt and result in windfall gains to regulated company shareholders. If the benefit to consumers cannot be shown, we would prefer the Commission's current ROTD approach for simplicity and better alignment with the 5 year regulatory period.

The graph below illustrates the impact of setting a TACD off historical rates. Contact estimates that the 10 year trailing average 5 year RFR would be over 2.50% p.a. higher than the current 5 year RFR as shown (difference between the red and green lines):



* averages are just "average to date" from 17/8/2011 onwards

The historical rates many of the submissions suggest the Commission should use relate to timeframes which have already been covered by regulatory periods. Contact is concerned that the use of historical rates would effectively be double-counting, particularly given that the actual effect is likely to artificially increase the cost of debt as a result (as the historical average rates are likely to be higher than prevailing

[4] Vector Submission to Commerce Commission on the IM review draft decision and IM report 4 August 2016, p.27 para 124.

for some time yet). As can be shown in the above graph (circled areas of blue and purple lines), falling interest rates have already provided a significant benefit to the EDBs. They should not benefit from high historical rates a second time. We note Dr Martin Lally makes the same arguments regarding use of historical rates.[5]

Instead, Contact suggests the Commission, if it decided to proceed with a TACD approach, should consider having a transition period. Contact has outlined in the attached Appendix some examples of how cost of debt calculations might transition from ROTD to TACD approach.

1.4 Debt issue costs

1.4.1 Bond issuance costs

We concur with HoustonKemp's principle of "efficient debt issuance costs" (p 3) which, as they state, aligns with the objectives of Section 52(A)(1) of the Commerce Act 1986. We note, and agree with HoustonKemp's statement (p 4) that this principle "does not require the Commission to accept the actual debt issuance costs of suppliers. Suppliers are free to adopt financing practices that are different from those assumed by the Commission, and may incur transaction costs that are higher or lower in doing so".

HoustonKemp's statements supports the Commission's financing assumptions (which Contact agrees with), namely the hypothetical efficient prudent issuer would be a regular issuer of domestic, retail, 5 year, publicly traded bonds.

Under the new FMCA regulatory regime, and with a backdrop of strong and growing investment demand from retirement savings funds, retail bond issuance costs have fallen dramatically. Contact stands by evidence in its earlier submission that 6-7bp is sufficient allowance for debt issue costs for the hypothetical efficient issuer. To be clear, Contact is making this assertion regarding costs for a BBB+ rated bond issue of $100 - $200+ million issued under the FMCA same-class exemption regime, taking into account *all* non-discretionary issue costs, including:

- Legal fees – issuer and trustee (one-off);
- Registry (one off and ongoing);
- Roadshow & printing costs (one-off);
- Rating fees (one-off);
- Arranger fees (one-off);
- Trustee fees (one-off and ongoing); and
- NZX fees (one-of and ongoing).

Contact, as a regular issuer of retail bonds and having issued recently under the FMCA same class exemption rules, believes a number of the costs cited in Powerco's submission regarding up-front costs are overstated (para 296.8 page 57). We note Powerco has not itself issued a retail bond under the new regulatory regime, nor has it issued a domestic, retail, listed bond post-GFC (Powerco's last such bond was issued in 2005). Contact would be happy to share in detail (copies of invoices etc.) its bond issuance costs with the Commission on a confidential basis.

To the extent an issuer decides it is net beneficial to do so, it may elect to pay for advertising, brokerage and/or Joint Lead Manager fees. This is a decision weighed up at the time depending on market conditions, specifics of a transaction (e.g. whether it's a vanilla 5 year bond or if it's more complex, unrated, subordinated or particularly long tenor bond) and the impact that this additional support might have on the net borrowing costs / debt premium.

[5] http://www.comcom.govt.nz/dmsdocument/14284.

Contact has not incurred any marketing costs in relation to any of its post GFC domestic bond issues. Contact elected to pay brokerage on its 2014 retail issue (0.4-0.5%) due to the fact it was an exchange offer and a slightly larger than normal parcel size ($550m maturing, $222m new bond issue).

Subsequently, Contact issued a $150m bond in 2015 on which no brokerage was paid as it was not seen as delivering a net benefit in terms of the cost of debt. There have been a number of examples of well-rated corporate issuers who have not paid brokerage for domestic bond transactions[6]. Brokerage is not payable on any wholesale issues (which some issuers such as Powerco have tended to favour). So, unlike the fees and costs listed above which are unavoidable costs of issuance, marketing, brokerage and JLM fees are a discretionary element of bond issue costs – and less likely to be incurred when issuing BBB+ rated vanilla, 5 year senior bonds.

We note a number of the submissions argue for a 25-35 bp debt issue cost allowance due to the increased costs incurred from issuing debt in offshore markets. Some of these arguments are based on the results of the confidential survey cited by CEG – it is not possible to tell what the composition of these costs were or the methodology used for compiling the results. We note also such references in the CEG submission on this matter (para 33-37 page 14) as "missing observations", "different units", "we generally adjust the entries based on the assumption…." which brings into question the reliability of the source data. The survey data is skewed to the high side by inclusion of cross currency and interest rate swap costs in debt issue costs – Contact's objection to this approach is discussed under "Swap costs" below.

In any case, in Contact's experience, issuance offshore is slightly cheaper in terms of up-front costs in bp p.a. This is for three main reasons, including:

1. A number of the cost elements listed above do not apply (e.g.: registry, rating, Trustee, NZX);
2. Issuance tenor tends to be longer, spreading the up-front costs out over a greater number of years; and
3. Issuance volumes tend to be larger, spreading the up-front costs (that are not determined as a percent of the transaction, such as roadshow) over a greater face value.

Costs for even the most expensive offshore funding source, being European markets (accessed via a European Medium Term Note programme), come in under 10bp p.a., given the minimum parcel size of about EUR300m (which means it's not a market that any regulated entity is likely to access other than perhaps Transpower).

We strongly recommend the Commission adheres to its approach of the hypothetical efficient, prudent issuer that funds via issuance of 5 year retail listed bonds in the New Zealand market. It is not appropriate (or fair to consumers) for a cost of funds to be determined for the entire regulated sector based on a selected portion of the funding portfolio from a selected portion of the regulated entities. The comments cited by FSI above are evidence that an efficient issuer can achieve lower debt costs than current settings allow for.

1.4.2 New issue premium costs

In relation to arguments for an allowance for new issue premium costs, Contact refutes the methodology used by HoustonKemp as not being statistically valid for a number of reasons:

- The sample set is dominated by banks, who tend to issue large tranches and have much greater counterparty exposure issues for investors who are already very heavily invested in the sector

[6] In addition to Contact, AIAL, Transpower, Spark, Fonterra and Auckland City Council have all recently issued domestic retail, listed bonds with no brokerage payable.

via bank deposits (and some of the issues are subordinated or covered bonds, so are not relevant for determining parameters applicable to senior, vanilla bonds);

- There is no consideration given to issue size e.g. for a particularly large issue such as Chorus' recent $400 million bond, a new issue premium may well have been received by investors – but this is not a typical market parcel size for an inaugural BBB bond, and not the size of transaction that would apply to a hypothetical, efficient, prudent issuer. Conversely, the sample also includes very small bond issue tranches ($12-50 million), which will trade infrequently and therefore have lower quality data points.
- The sample set includes a number of bonds issued in 2009/10 (immediately post-GFC), a rather exceptional time in capital markets and one which involved a high degree of uncertainty – data from bond issuance in this time cannot be considered as indicative of likely conditions or parameters over the coming years;
- The sample set should be confined to investment-grade, rated, senior, unsecured, retail listed bonds, but instead includes a wide variety of instruments such as wholesale bonds, unlisted retail bonds, unrated bonds, secured bonds (Precinct, Kiwi Property), securitisation vehicles (Medical Securities), bank sub debt (CCB), bank covered bonds (BNZ) and corporate sub debt (FLB Capital Notes);
- As HoustonKemp itself admits, there is no theory that informs what time period is most suitable for determining a new issue premium – market data as well as other factors like supply and demand, general market sentiment/risk appetite in relation to credit can all affect a bond's pricing very soon after issuance, so measuring a change in credit spread over time (we note the emphasis is placed on an 8 week period) is a very unstable parameter for determining the existence and quantum of any new issue premium. This is evident from looking at the outcome of HoustonKemp's analysis, which exhibited high standard deviation relative to the mean (table 1, page 11). Our own analysis of a selection of bonds from the sample set produces quite different outputs, so if the Commission was to rely on this analysis in any way, we would recommend an independent review.

As was set out in Contact's IM submission, a "snapshot" comparison to market pricing of relevant bonds around the time of pricing / issuance is the best means of determining if any new issue premium exists. Contact contends, based on the evidence provided in our submission, that there is no new issue premium for the relevant type of bond being considered.

1.4.3 Liquidity and prefunding costs

HoustonKemp estimated $1.69 million p.a. for Powerco liquidity and prefunding costs[7] (a detailed calculation for which is set out in HoustonKemp's earlier submission[8]). We comment on this matter as follows:

a) Liquidity buffer

We note that the calculation applied by HoustonKemp for determining the liquidity buffer requirements does not correctly follow the Standard & Poor's (**S&P**) methodology for regulated utilities in two key areas.

- Firstly, in the S&P bulletin "Methodology and Assumptions: Liquidity Descriptors for Global Corporate Issuers" bulletin (dated 16 December 2014), HoustonKemp cite paragraphs 37 and selected parts of paragraph 39, but do not refer to paragraph 38, where S&P states "for the purposes of calculating adequate liquidity, the debt maturities and the undrawn, available portion of committed credit facilities are

[7] Issues raised by the Commerce Commission's draft decision on cost of capital, A report for Powerco, 3 August 2016, p.6.
[8] Comment on the Commerce Commission's cost of capital update paper, A report for Powerco, 5 February 2016, p.15-20.

based on *a six-month time horizon* for companies with certain strong credit characteristics. The A/B and A-B tests for the adequate category use debt maturities within the *next six months* as a use of liquidity and include the undrawn, available portion of committed credit facilities that matures *beyond the next six months* as a source of liquidity (emphasis added)." It can be assumed that the hypothetical issuer would meet the "certain strong credit characteristics" test. HoustonKemp only makes reference to a 12 month time horizon, not a 6 month timeframe allowed for issuers with an investment grade credit rating and good debt management practices. This has material implications for the cost of liquidity facilities - given that they only need to be > 6 months tenor to meet S&P liquidity criteria, they will have materially lower cost than the 0.5-0.6% p.a. fees cited by HoustonKemp. Contact pays materially less than this for its one year tenor debt.

- Secondly, HoustonKemp have not made any reference to the Key Credit Factors that apply to regulated utilities. Certain refined criteria that apply to regulated utilities is set out in a separate S&P bulletin "Key Credit Factors for the Regulated Utilities Industry" dated 19 November 2013. Paragraphs 83 and 84 of this bulletin set out some concessions in terms of the liquidity ratio and EBITDA "haircut" which are relaxed from 1.2 to 1.1 times and 15% to 10% respectively. HoustonKemp's calculations for the cost of liquidity facilities do not incorporate the concessions allowed for in this bulletin and therefore cannot be relied upon.

As noted in Section 1.2 above, HoustonKemp calculations assume a 5 year average debt scenario when calculating the required liquidity buffer (the quantum of upcoming debt maturities is one of the inputs), yet the ENA (of which Powerco is a member) argues for a 10 year tenor in their submission, which is not consistent. If the arguments were consistent, the proportion of the liquidity buffer costs relating to debt maturities would halve.

Contact's liquidity buffer facilities cost less than 0.05% p.a. equivalent when the expense is spread across its entire funding portfolio. This cost is more than made up for by leveraging other efficiencies in the portfolio such as issuing short term commercial paper (about 0.50% p.a. cheaper than drawing on bank facilities). Contact's view is that there are both costs and efficiencies involved with managing a large funding portfolio, so a special allowance for liquidity facilities is not necessarily required.

b) Prefunding costs ("cost of carry")

- HoustonKemp calculations state that cost of carry is 2.4-2.6% p.a. being the difference between the cost of debt and the three month bank bill / Treasury bill rate. Contact considers this to be overly conservative – for example, Contact could currently (and this has been the case for many years now) invest for three months at a spread of 0.5-0.6% above the current bank bill rate, implying that the cost of carry is overstated by 0.5-0.6%.
- However, discussion of the spread between borrowing and investing is somewhat academic - given short term bank facility costs of about 0.3% p.a. (based on Contact's experience, adjusted for tenor and rating), then the most efficient approach is to cover 3 month refinancing risk with an additional short term bank facility instead of incurring a much higher cost of carry.
- In any case, there are also other additional ways of avoiding or minimising prefunding costs: forward start (available in USPP), early repayment (available in USPP up to 3 months), using funds to repay other outstanding short term bank debt or commercial paper or bridging the maturity with additional short term bank facilities (which means the borrower actually enjoys a benefit from the temporarily lower cost of funds).

1.5 Swap costs

We believe the allowance for swap costs will fall away if a TACD approach is adopted in the form suggested above. However, should the final approach align with the need to include swap costs, we wish to note in relation to the submissions:

- A number of the submissions cited swap costs from a confidential survey, which we do not have the ability to scrutinise or analyse to check the inputs are all valid and appropriate. In addition, we note that the survey respondents are not unbiased i.e. they have a vested interest in the outcome from the survey. We also note, from the CEG submission, some questions regarding the reliability of the data: "one submitted an implausibly large estimate exceeding 1%" and "one respondent sates [sic] that swap transaction costs are embedded into swap rates".
- A number of the submissions also cited swap costs including cross currency and interest rate swaps (CCIRS) in the sample set. Including CCIRS costs as part of swap costs is inappropriate, interest rate swaps (IRS) and CCIRS are two completely different instruments with completely different purposes. Under the approach set out by the Commission, an IRS would be used to shift the timeframe for fixed rate exposures arising from the debt portfolio to align with the regulatory period to minimise the mismatch between actual funding costs and those allowed for under the WACC settings. On the other hand, CCIRSs are used to convert the exposures from foreign currency debt to NZD exposures. CCIRS costs are typically much higher than NZD interest rate swap costs, as they are long-dated, more capital intensive instruments with a higher degree of execution risk. A 7 year CCIRS cost might be in the order of 5-10bp (depending on market conditions, counterparty and other factors) compared to about 1-3bp for a 7 year NZD interest rate swap.
- The ENA submission[9] cites UBS estimates of swap costs in Australia as justification of higher swap cost allowance. However, it is commonly known that the New Zealand banking and financial markets are significantly more competitive than those in Australia, in spite of lower liquidity. In this instance, it is not appropriate to apply Australian data to a New Zealand situation.

In response to Powerco's comments on swap costs,[10] Contact notes (in response to para 299) that the calculations in our submission *did* make an allowance for all costs (credit and execution) to pay *and* receive swaps required for perfect hedging. We also stated that "if some debt was issued on a floating rate basis (or borrowed via bank facilities), then the quantum of swaps required would reduce" (no receive fixed swap would be necessary for floating rate debt). We note that at its last balance date, Powerco had $205m of drawn floating rate bank debt and $170m of floating rate bonds – together making up over 30% of its drawn debt. Since balance date, Powerco has also issued a $100m 3.5 year floating rate domestic wholesale bond. Vector currently has over $900m of floating rate notes on issue, comprising 40% of its total funding.

Contact also contends that Powerco's suggestion[11] that the banks "are disinterested parties" is not entirely correct – banks are the counterparties for any such swap transactions, so have a vested interest (should they be surveyed) to be conservative with any swap cost determination. Perhaps a better source would be a survey of the wider market (not just entities subject to regulation), or Bloomberg live swap quotes. Five year swap prices quoted by the major NZ banks on Bloomberg (NDSW5 <currency> ALLQ) show a pay/receive spread of 3-4 bp (which translates to a swap spread to mid of 1.5-2bp, in line with that suggested by Contact). Given that vanilla interest rate swaps use a relatively low amount of capital and execution risk (compared with CCIRS), the 10bp cited by Powerco[12] seems high.

[9] ENA Input Methodologies review – Topic paper 4 cost of capital issues, 4 August 2016, para.64.
[10] Powerco submission on Input Methodologies Review Draft Decisions, 4 August 2016, paras. 297-305.
[11] Ibid para. 305.
[12] Ibid para. 330.

1.6 Term Credit Spread Differential (TCSD)

Contact's stands by its arguments from previous submissions that a TCSD is not appropriate. This stance is further strengthened should the Commission look to adopt a TACD approach. We note that Vector's submission supports this stance, stating that "a trailing average would largely negate the need for a TCSD".[13]

Nonetheless, Contact makes the following comments in response to various submissions for the Commission to consider in the event that it makes an allowance for term debt:

- We note the submissions from CEG and ENA argue for a changes in the statistical approach for determining the TCSD. Contact does not have any issues with adopting the most appropriate statistical methodology, but would urge the Commission to ensure the data inputs are adjusted for inconsistencies (e.g.: retail v wholesale bonds) or unreliable data points (e.g.: where the volume of a bond tranche on issue is below $50 million), as per our earlier submission. We don't have the data supporting the analysis for the CEG submission, but strongly suspect that the only valid data points in table 314 are those from Auckland International Airport (a slope of 2bp p.a.) and Contact Energy (a slope of 6 bp p.a.), being the only two entities with multiple, and relevant listed retail bonds.
- We also would urge the Commission to avoid using the NSS curve for determining TCSD inputs for the reasons outlined in our earlier submission.
- Data for determining the extent of any TCSD allowance must come from transparent, publicly available, traded & verifiable market data. Including data points from debt issued offshore in private markets is not acceptable as it does not meet these criteria.

1.7 Debt premium – standard error/NSS curves.

We agree with the ENA submission[15] that continued use of a standard error of 0.0015 for DRP does not make sense. The ENA submission goes on to suggest the standard error should be derived from the NSS regressions, but does not state the rationale. However, Contact believes this would distort the standard deviation higher due to the data set including bonds rated higher and lower than BBB+, as well as the skew (and greater variation) seen for tenors much shorter or longer than the Commission's 5 year benchmark. Rather, Contact is of the view that the standard error should be formulated from the same data set used to determine the debt premium using the typical standard error formula, for reasons of transparency, simplicity and accuracy.

Contact would also like to re-emphasise its earlier recommendation that the RFR, and determination of debt premiums from the RFR are both done using mid rates. This aligns with the assumption of funding via bonds, which are priced off mid rates, and also avoids any skew when determining the spread between the RFR and bond yields.

2 Cost of equity

2.1 Gas versus electricity asset betas

First Gas[16] and Oxera[17] reviewed the asset betas for gas and electricity companies from the Commission's full comparative companies ("compcos") dataset, and found that the average beta for the

[13] Vector Submission to Commerce Commission on the IM review draft decision and IM report, 4 August 2016, para. 124.
[14] CEG Review of the proposed TCSD calculations, Dr Tom Hird, August 2016, Table 3, p.2.
[15] ENA, Input Methodologies review – Topic paper 4 cost of capital issues, 4 August 2016, para. 97.
[16] First Gas, "Submission on Input Methodologies Review Draft Decisions: Cost of Capital Issues", 4 August 2016.

gas companies was higher than those for the electricity companies. This finding is consistent with the analysis of TDB Advisory[18] who found that, using the Commission's original compco data set, there appears to be a significant difference between the Commission's estimates of the mean betas for the gas and electricity companies: the average betas for the 16 electricity companies and 40 integrated companies are 0.29 and 0.30 respectively, while the average beta for the 18 gas companies is 0.45.

TDB Advisory also found that there were many companies in the Commission's compco set that have risk profiles markedly different from the regulated New Zealand energy network services. This was particularly the case for the gas companies in the Commission's sample set, many of which had unregulated gas gathering, processing and liquids business segments that increase exposures to commodity price fluctuations. There were also many companies in the Commission's electricity compcos set that had activities much different from the transportation of electricity. When those companies with markedly different risk profiles from gas and electricity transportation service were excluded from the respective datasets, the difference between the average betas for the electricity and gas companies narrowed markedly.

Oxera suggest that the Commission should screen the companies in the compco set on the basis of the liquidity and gearing of the companies.[19]

- As proxies for liquidity Oxera uses the percentage of shares in free float and the bid-ask spread to exclude companies that are assessed to be illiquid. There are, in our view, limitations to both measures as proxies for liquidity. A company's shares could still be liquid if it has a high absolute number and value of shares traded, even if the percentage of its shares in free float is small. The bid-ask spread may be a useful measure but we would like to know what is driving the high-bid ask spread for the company that Oxera excludes on this basis. If the aim is to get a measure of the liquidity of the shares (which we agree is meaningful) it may be better to use a more direct measure of liquidity such as the mean daily number of shares traded.
- Oxera has chosen to remove one company from its sample due to high leverage levels (AES Corp). We agree that extreme leverage and the higher potential for default may be problematic for analysis, but given AES's gearing levels average 67% for 2011-16[20] and as such are close to both the range provided by Ofgem (55%-65%) and lower than many of the firms that are being regulated[21] we are cautious of removal from the sample set just for this reason. Other information such as credit rating should be used to confirm the higher potential for default. In this case AES does have a sub-investment grade credit rating from S&P of BB, so removal from the sample set is justified on this basis.

Given the importance of the choice of compcos for the estimate of the beta(s), we believe further work is required by the Commission to investigate the appropriate compcos for the New Zealand energy network services. In particular, we encourage the Commission to review the appropriateness of the companies included within its compco dataset to ensure each is truly comparable to New Zealand regulated services before the Commission makes a final ruling on the appropriate asset betas, leverage and standard errors. As suggested by former Commerce Commissioner Patrick Duignan,[22] it may be helpful for the Commission to engage an independent adviser with in depth knowledge of the compcos, their operations and regulatory environments. We would be very happy to work with the Commission in any such investigation.

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[17] Oxera, "Asset beta for gas pipelines in New Zealand", 3 August 2016.
[18] TDB Advisory, "Submission to the Commerce Commission on the Input Methodologies Review Draft Decisions: Comparative Company Analysis", 4 August 2016.
[19] Ibid, p. 13.
[20] See http://comcom.govt.nz/dmsdocument/14592.
[21] See Appendix C of Transpower submission: http://comcom.govt.nz/dmsdocument/14564.
[22] Patrick Duignan, "Gas Pipeline and Electricity Lines Businesses Beta Analysis" 30 June 2016.

We note that such a review may lead the Commission to adopt a much smaller number of companies in its dataset. We do not consider this is necessarily a problem. As we have noted previously, it is standard commercial practice to use a small number of similar compcos when determining a WACC rather than a large number of dissimilar companies. Further, as Oxera notes in its submission, regulators in Australia, France, Netherlands, Northern Ireland and the UK use small compco sample sets (of between four and ten companies) when setting an asset beta for energy companies.[23]

2.2 Daily vs weekly vs four–weekly asset betas

PwC, in its submission, notes that there is no clear theoretical basis for preferring daily, weekly or four-weekly estimates of asset betas and suggests that the Commission should use an average of daily, weekly and four-weekly beta estimates when determining an appropriate asset beta.[24]

TDB Advisory in its submission to the Commission notes that the default method reported by Bloomberg and Value Line is the weekly beta.[25] However, there does not seem to be any accepted best practice regarding the actual use of daily, weekly or four-weekly betas when estimating a company's WACC.

We agree with PwC that that there is no clear bias in theory to prefer a particular estimation period. We consider it is important the Commission is transparent and consistent in its approach. We also note that estimates of daily betas can be particularly volatile. Further, as internationally recognised corporate finance expert Professor Aswarth Damodaran notes:[26]

> *"Using shorter return intervals increases the number of observations in the regression, for any given time period, but it does come with a cost. Assets do not trade on a continuous basis, and when there is non-trading on the asset, the beta estimated can be affected. In particular, non-trading on an asset during a return period can reduce the measured correlation with the market index, and consequently the beta estimate.*
>
> *This non-trading problem can be reduced in one of two ways. One way is to use longer return intervals; quarterly and annual returns result in to [sic] few observations in the regression, but monthly returns should provide sufficient observations for firms listed for more than three years. Betas estimated using daily or even weekly returns are likely to have a significant bias due to the non-trading problem, with illiquid firms reporting lower betas than they really should have and liquid firms reporting higher betas than is justified."*

We suggest in these circumstances that a pragmatic and transparent way forward is for the Commission to consistently take an average of the weekly and four-weekly betas to minimise estimation error due to the choice of reference period.

3 Price/RAB multiple

FSI provided guidance in its submission as to potential reasons for Price/RAB ratios above 1.0x, and in particular referenced its own recent transactions at a ratio well above this level.[27]

[23] Oxera, op. cit., Table 2.1, p. 11.
[24] PwC, "Submission to the Commerce Commission on Input methodologies review: draft decisions papers" 4 August 2016.
[25] TDB Advisory, "Submission to the Commerce Commission on the Input Methodologies Review Draft Decisions: Comparative Company Analysis" 4 August 2016, footnote 1, p. 6.
[26] www.stern.nyu.edu/~adamodar/pdfiles/papers/beta.pdf, p10-11.
[27] First State Investments "Submission on IM review draft decision – cost of capital" 4 August 2016.

We have a number of concerns regarding the implications of statements in this document for New Zealand regulated service consumers and do not agree with the conclusion that the Commission (and ultimately consumers) should be comfortable with Price/RAB ratios well in excess of 1.0x. A Price/RAB ratio of well above 1.0x indicates that excess profits have likely been made by selling shareholders in the transaction, which is in direct conflict with Section 52(A)(1)(d). Rather than accepting these results, we believe the Commission should, on behalf of customers, investigate why these excess returns have been delivered to shareholders instead of customers.

Below we expand on our concerns with topics raised in the FSI paper.

3.1 The 67th percentile will produce Price/RAB above 1.0x

We agree with FSI that "we find it inconsistent for the Commission to aim high when setting WACC (by using the 67th percentile of its range of WACC estimations), and then expect RAB multiples of 1."[28] We have expressed concern with the 67th percentile adjustment in our prior submission[29] and concern that this is not subject to review as part of this process. We are also concerned that investors i.e. in this case FSI see this as a methodology that aims high, and as such question the additional value gained to consumers through the use of the 67th percentile in the IMs.

3.2 Unregulated activities, intangibles and control premium

Potential unregulated activities and intangibles can provide additional value to the purchaser assets. Where this value comes from assets or cost components outside of the regulated allowances, we agree that this should be allowed and Price/RAB is likely to be above 1.0x. However, where this excess value is being derived from assets and costs already paid for by consumers through regulation, we question why the benefits of these are not being seen by consumers, as we would expect in a competitive market[30].

With regard to specific additional value for control premium, we note that such premium are defined by Professor Aswarth Damodaran as:

- *"The value of controlling a firm derives from the fact that you believe that you or someone else would operate the firm differently (and better) from the way it is operated currently.*
- *The expected value of control is the product of two variables:*
    - *the change in value from changing the way a firm is operated*
    - *the probability that this change will occur";*[31]

and

- *"The value of control in a firm should lie in being able to run that firm differently and better. Consequently, the value of control should be greater in poorly performing firms, where the primary reason for the poor performance is the management."*[32]

We note FSI has outlined in its submission multiple improvements it expects to make to operations, and we would consider control premium to be captured in those areas. Additional allowance without assignment to "the change in value from changing the way the firm is operated" is not justified.

[28] Ibid p.4.
[29] Contact Energy "Submission on IM review draft decision" 4 August 2016 p.35.
[30] See appendix C of Contact's prior IM submission (4 August 2016) for an example of where excess returns are being generated from ripple control assets in the RAB and how this would differ in a competitive market.
[31] Stern School of Business, "The Value of Control", p.3. See: http://www.stern.nyu.edu/~adamodar/pdfiles/country/controlvalue.pdf.
[32] Ibid p.38.

3.3 Outperformance through merger efficiencies and other improvements

FSI has outlined that it expects to be able to lower costs relative to prior owners through merger efficiencies and other improvements that "the previous owners have not been able to achieve."[33] Both forms of outperformance are stated as being directly relevant to the former Vector and Maui pipeline assets, now owned by First Gas.

In competitive markets, companies which do not operate efficiently relative to their peers are expected to earn below normal returns. Consumers benefit as companies improve efficiencies, unless such efficiencies are unique to one firm.

Given the above statements by FSI, we are concerned that consumers have clearly paid too much for services previously provided by the former owners of the Vector and Maui pipeline assets, as these costs are higher than would be expected in competitive markets. Similarly we do not see why consumers should allow additional excess returns to FSI just to reach what would be an efficient operating cost level, unless the operating cost savings are unique to the synergies only FSI could bring.

The statements by FSI bring into question the appropriateness of cost setting allowances in the IMs and whether they are in fact in line with outcomes produced in competitive markets and Section 52(A)(1). In light of this evidence we see it as prudent for the Commission to investigate other cost setting mechanisms that would be more akin to competitive markets, such as cost benchmarking.[34]

3.4 Growth Potential

FSI has made a number of statements regarding additional value from growth. Statements that investing new capital in regulated assets "contribute to the economics of paying a premium over RAB"[35] highlight that the returns on these investments are expected to be above FSI's cost of capital. This is not in line with the NPV=0 principle.

3.5 Intrinsic Value

FSI has made a number of statements that imply its cost of capital may be lower than the regulated WACC, due to scarcity value, capital availability, risk appetite, strategic value and portfolio benefits. FSI states that, as a consequence of these factors "value can justifiably lead to a RAB multiple above 1."[36]

In contrast, we do not believe it is the intention of Section 52(A)(1) for the IMs to set a benchmark capital return based on an investor with high capital costs. Rather, in competitive markets returns for all competitors will be bought down if competitors have access to lower cost of capital. Consumers should benefit from efficient capital management and not pay to compensate for the highest cost provider.

We have highlighted concerns with capital costs earlier in this paper and these statements by FSI support these concerns. We do not see these capital benefits as unique to FSI, and with liquid capital markets and the existence of multiple potential investors see no reason why FSI's costs would not be reflective of an efficient firm.

[33] First State Investments "Submission on IM review draft decision – cost of capital" 4 August 2016, p.5.
[34] As conducted by overseas regulators. For example see: http://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/annual-benchmarking-report-2015.
[35] First State Investments "Submission on IM review draft decision – cost of capital" 4 August 2016, p.6.
[36] First State Investments "Submission on IM review draft decision – cost of capital" 4 August 2016, p.6-7.

3.6 Conclusions

Consumers are concerned about the profitability of regulated companies and can see evidence of this in high Price/RAB multiples.[37] While we agree it is difficult to see everything behind the drivers of such multiples, the FSI submission has raised a number of concerns that consumers are paying too much for these services and not benefiting from unregulated activities derived from these privileged monopoly positions. This is not an outcome that would be expected in competitive markets and we see it as not in line with Section 52(A)(1).

We remain uncomfortable with Price/RAB multiples above 1.0x and a number of submissions have provided additional concern regarding the extent that New Zealand consumers are paying too much for these regulated services. We encourage the Commission to investigate this and other evidence provided in prior submissions further, to ensure outcomes are being provided in the best long term interest of consumers.

Yours sincerely

Simon Healy
GM Commodity Risk and Strategy

[37] See http://comcom.govt.nz/dmsdocument/14076, p.3 and http://comcom.govt.nz/dmsdocument/14553 p.9.

Appendix

Examples of transition from Rate on The Day (ROTD) to Trailing Average Cost of Debt (TACD)

The most theoretically accurate approach would be to use a weighted combination of 1-5 year rates should be used at the outset, with each proportion being replaced with a prevailing 5 year rate as it matures. This is illustrated in the table below as Option A.

Under this scenario, to perfectly hedge, an issuer would fund via a combination of 1-5 year debt and as each tranche matures, replace it with new 5 year debt.

This approach has two benefits: (i) it can be perfectly hedged and (ii) it delivers the most efficient cost of funds for the issuers, and therefore consumers.

Date	Cost of debt calculation (Option A)
First Determination date - Year 0 (Y_0)	20% 1y @ Y_0; 20% 2y @ Y_0; 20% 3y @ Y_0; 20% 4y @ Y_0; 20% 5y @ Y_0
Year 1 (Y_1)	20% 2y @ Y_0; 20% 3y @ Y_0; 20% 4y @ Y_0; 20% 5y @ Y_0; 20% 5y @ Y_1
Year 2 (Y_2)	20% 3y @ Y_0; 20% 4y @ Y_0; 20% 5y @ Y_0; 20% 5y @ Y_1; 20% 5y @ Y_2
Year 3 (Y_3)	20% 4y @ Y_0; 20% 5y @ Y_0; 20% 5y @ Y_1; 20% 5y @ Y_2; 20% 5y @ Y_3
Year 4 (Y_4)	20% 5y @ Y_0; 20% 5y @ Y_1; 20% 5y @ Y_2; 20% 5y @ Y_3; 20% 5y @ Y_4
Second Determination date - Year 5 (Y_5)	20% 5y @ Y_1; 20% 5y @ Y_2; 20% 5y @ Y_3; 20% 5y @ Y_4; 20% 5y @ Y_5

signifies transition period

Alternatively, the Commission might choose a transition arrangement whereby 100% of the cost of debt is set at the prevailing 5 year rate at the outset, with 20% of the cost of debt input being updated each year with the then prevailing 5 year rate. This is illustrated in Option B below.

This approach has two drawbacks, namely (i) it would deliver a windfall gain to the hypothetical regulated issuer and (ii) it delivers a less efficient cost of funds as all debt is priced off a 5 year tenor and no component of debt is priced off shorter (and therefore cheaper) tenors.

Each year the hypothetical issuer would issue 20% of its debt as 5 year debt, but in the intervening period, it would be receiving a 5 year cost of debt under the WACC allowance, but paying a 1-4 year cost of debt (pending refinance with a 5 year bond).

Date	Cost of debt calculation (Option B)
First Determination date - Year 0 (Y_0)	100% 5y @ Y_0
Year 1 (Y_1)	80% 5y @ Y_0; 20% 5y @ Y_1
Year 2 (Y_2)	60% 5y @ Y_0; 20% 5y @ Y_1; 20% 5y @ Y_2
Year 3 (Y_3)	40% 5y @ Y_0; 20% 5y @ Y_1; 20% 5y @ Y_2; 20% 5y @ Y_3
Year 4 (Y_4)	20% 5y @ Y_0; 20% 5y @ Y_1; 20% 5y @ Y_2; 20% 5y @ Y_3; 20% 5y @ Y_4
Second Determination date - Year 5 (Y_5)	20% 5y @ Y_1; 20% 5y @ Y_2; 20% 5y @ Y_3; 20% 5y @ Y_4; 20% 5y @ Y_5

signifies transition period