Submission to Commerce Commission by Orcon Ltd in response to consultation paper, "Determining the cost of capital for the UCLL and UBA price reviews"

28 March 2014

Public version: there is no confidential version

Table of Contents

Introduction and Summary

1. **The focus of this submission**: This submission addresses only whether and how the Commission should set WACC above or below the mid-point estimates. While most of the submission is also relevant to the application of s 18 across all FPP issues, you have asked us not to address generally applicable s 18 issues and evidence at this point.[1] We will expand on the latter in our response to the Commission's 14 March 2014 UCLL and UBA consultation paper. What is said there is relevant to possible WACC adjustments under s 18.

2. The approach in this submission is to outline a set of principles to be applied by the Commission, and then to explain why and how those principles apply.

3. **Dynamic efficiency does not necessarily lead to asymmetric risk:** On the UBA IPP Price Review, the Commission decided, with little supporting empirical or theoretical evidence, that:[2]

> "On balance, we accept in principle that the risk to dynamic efficiency of a low access price is asymmetric and that the balance of risk favours setting a price that errs on the high side. Consequently, we believe some adjustment is appropriate to take account of asymmetric risk."

4. That is an approach often taken by the Commission in the past, with little reference to and reliance upon empirical or other evidence. It is what happened in the Commission's IM decision which was the subject of appeal. The court criticised that approach without empirical evidence.

5. The court said that the Commission's assumption that dynamic efficiencies pointed to asymmetric risk was treated as "axiomatic" by the Commission,[3] and that could not be justified.

6. **Two court decisions confirm Commission cannot simply conclude that dynamic efficiency trumps other issues**: Even if that approach, based on little empirical evidence and analysis, was acceptable at the IPP stage,[4] what is now clear is that such an approach is not available on the UBA and UCLL FPPs. The FPPs require substantially more rigour. This flows from two appeal decisions:

   6.1. the High Court's IM judgment[5] in December 2013 (the month after the UBA IPP decision); and

   6.2. the Australian Competition Tribunal's decision on the UCLL TSLRIC adjustment of WACC above the median in the Telstra judgment, which was relied on in the IM judgment.[6]

7. In this submission, these judgments are called the IM judgment and the Telstra judgment.

---

[1] Footnote 18 in the UBA and UCLL WACC discussion paper.
[2] UBA Price Review 3 November 2014 at [231]
[3] IM Judgment at [1462]
[4] We do not consider that it was
[5] Wellington International Airport and others v Commerce Commission [2013] NZHC 3289
[6] Re Telstra Corporation Ltd (No 3) [2007] ACompT 3

8. The regulatory framework for the UBA and UCLL FPPs is sufficiently similar to the circumstances under review in both the IM judgment and the Telstra judgment that the Commission must apply the decisions in those judgments in assessing whether to set the WACC above the median for the TSLRIC assessment:

    8.1.1. The IM judgment is about whether to increase WACC beyond the median under similar legislation, where the sole focus according to the Part 4 purpose statement is consumer welfare, which is the case with s 18 too. As the Commission's UBA and UCLL WACC paper explains, the approach to WACC in principle is similar even though parameters and evidence may change. The fact that the IMs deal with RAB and the FPPs deal with TSLRIC makes no material difference.

    8.1.2. The IM judgment relies upon the Telstra judgment, which is also a case of applying WACC in a TSLRIC pricing model for UCLL (called ULLS in Australia).

9. **Applicable principles in light of the two decisions:** The requirements upon the Commission, pursuant to those judgments, can be stated as a set of principles to be applied by the Commission when deciding whether to move away from the median WACC figure. One aspect that emerges from the discussion about how s 18 applies, in both the Commission and the UBA High Court appeal, is that having a set of clear principles that delineate the approach will help the Commission and the parties, and reduce appeal risk. However, the detail below the principles, such as the detailed exposition in the judgments, and also later in this submission, remain relevant.

10. We consider that it is particularly important for the Commission to be clear about its processes and how s 18 is applied as to do otherwise can fall into error. There is an example of this in the IPP UBA determination at [60] when the Commission said: "Section 18 establishes that our purpose in making this determination is first and foremost to "promote competition in telecommunications markets for the long-term benefit of end-users". However, that was clearly not its first and foremost purpose. Its first and foremost purpose was to determine the best estimate of the cost-based price. That is a question of what a service costs to provide, and not a question of how that promotes competition. A purpose statement does not override the clear words of an Act.

11. **Applicable principles:** These principles, flowing from the two judgments, are:

    11.1. There can be departure from the median WACC only if justified by "robust empirical examination, well-guided by theory, of the actual facts of any particular case."

    11.2. Such robust empirical approach requires a sufficiently comprehensive quantitative cost-benefit analysis solely from the perspective of consumer welfare;

    11.3. Such empirical analysis must reflect the real world costs and benefits. For example, it is generally recognised that TSLRIC overcompensates the copper network supplier and that over-compensation needs to be factored into the analysis.

11.4. There can be no assumption, absent specific evidence, that the underestimation of WACC leads to lesser consumer welfare outcomes than overestimation of WACC, in regulated businesses including as to UBA and UCLL;

11.5. The starting point is: "Given an unbiased estimating procedure by the regulator, the WACC will on average be correctly estimated over time. In contrast, if the best point estimate of the WACC is systematically increased by some arbitrary amount like one standard deviation, then in the long run cost over recovery will occur with all of its negative social consequences."

11.6. There can be no assumption that regulators internationally favour a WACC higher than the median (and even if they did, it does not follow automatically that the WACC should be increased above the median here);

11.7. Dynamic efficiencies are not necessarily promoted by a higher WACC (they may be better promoted by a lower WACC): again, evidence and empirical analysis is required;

11.8. There must be consideration, based upon factual and theoretical analysis, of a two-tier approach to WACC by which no uplift is required as to sunk investment;

11.9. Regard must be had to the fact that nearly all of the capital invested in the UCLL and UBA networks is sunk, and therefore an uplift over the median is not required;

11.10. Similarly, the UFB investment is an investment to which Chorus and the LFCs have already committed. Therefore there is no need for an uplift.

11.11. The regulatory and commercial framework is one which has competition from non-UFB networks at its heart, and s 18 is solely about competition in the LTBEU. That drives the s 18 approach.

11.12. The onus is on Chorus to show, by sufficiently robust empirical and theoretical analysis and reasons, that there should be an increase above the median. If Chorus cannot prove this, there can be no uplift.

11.13. The approach must be based on a sufficiently robust statistical methodology;

11.14. It is possible that consumer welfare is best met by a reduction of WACC relative to the median, but such a conclusion would require robust empirical evidence.

12. **Obligations upon the Commission:** To the extent that the Commission dilutes its approach and moves away from a quantitative CBA and from the approach above, the Commission does not comply with its legal obligations.

13. Put another way, the Commission substantially reduces the risk of an appeal to the extent that it undertakes a quantitative CBA, incorporating the elements in the IM and Telstra

judgments. The Commission should not take the appeal risk of departing from a comprehensive quantitative CBA incorporating the above elements.

14. We now turn to explain each of the principles in the order they appear above, repeating the principle in each case.

There can be departure from the median WACC only if justified by "robust empirical examination, well-guided by theory, of the actual facts of any particular case."

15. This is the primary principle that underpins the remaining principles, so we will overview it in more detail. The quoted statement in this principle is from the Telstra judgment, as relied upon in the IM judgment at [468].

16. In both the Telstra and the IM judgments, the parties disputing the Commission's choice of WACC relative to the median failed as they did not prove their case based on sufficiently robust empirical evidence:

    16.1. The Major Electricity Users Group (MEUG), as a consumer of services, failed to provide evidence and a theoretical basis to show that the uplift to the 75th percentile was in error in the IM matter.

    16.2. Telstra failed to provide enough empirical evidence and a theoretical basis to show that the ACCC should have increased the WACC over the median.

17. However, in the IM judgment the court made clear its concerns as to how the Commission approached the issue, and it detailed those concerns in the judgment, to be used when the issue came up for review later. A number of those concerns are reflected in the above principles. Whether to review the IM uplift issue is currently being considered by the Commission, following submissions earlier this month by the parties.[7]

18. In regard to forthcoming review of the IM WACC uplift, the court said that it had "scepticism about using a WACC substantially higher than the mid-point" and that the issue should "receive robust empirical examination, well guided by theory, of the actual facts of any particular case".

19. It stated at [468] with highlighting added:

> "…we are mindful that the IMs will be reviewed**. At that time, we would expect that our scepticism about using a WACC substantially higher than the mid-point, as expressed above, will be considered by the Commission.** We would expect that consideration to include analysis – if practicable – of the type proposed by MEUG. We would also expect the Commission to consider MEUG's two-tier proposal in light of our observations. We acknowledge that further analysis and experience may support the Commission's original position. But they may not. The following passage from the Telstra case is pertinent:
>
> > … there exists as a matter of theory the potential for asymmetrical consequences should the WACC be set too low or too high**. Which of these consequences will carry with it the greatest social damage is not a matter solely for theory, however, but for robust**

[7] In parallel, MEUG is seeking leave to appeal the decision not to disallow the 75th percentile issue.

> **empirical examination, well-guided by theory, of the actual facts of any particular case**."
> [footnote removed]

20. However, in relation to the UBA and UCLL FPPs, the concerns of the courts in the IM and the Telstra judgments are now known and ought be applied forthwith. The fact that MEUG has failed so far to overturn the decision does not affect that position.

21. The Tribunal in the Telstra case noted:

> 448 The Commission submitted that there was no clear empirical evidence of the asymmetries contemplated by Professor Bowman as a matter of fact, such that one or the other was relatively more likely to promote the long-term interests of end-users.
>
> 449 We accept that it is possible that there may be asymmetric consequences associated with setting a WACC too high or too low. However, it is not clear to us that the asymmetry would always imply that overestimation of the WACC led to a lesser social cost than underestimation of the WACC. The nature of the asymmetric consequences of incorrectly setting a WACC is likely to depend on the circumstances of a given matter that may be before the Tribunal. Telstra and Professor Bowman submitted that the long-term social costs of underestimating the WACC would be greater than the long-term social costs of overestimating it in this particular instance, largely because in circumstances where the WACC was set too low, there was a risk that this would lead to the cessation of services, or a failure to develop services at a socially desirable rate. In order to convince us of this submission, however, it was incumbent upon Telstra to provide evidence that these circumstances actually existed or would exist in relation to the ULLS. Professor Bowman assumed that they did, but he did not provide any evidence or support for the proposition that this was, or would be, the case.
>
> 450 Telstra assumed that setting a WACC that was too low would deter investors. However, different investors will inevitably have different attitudes to risk. Setting the WACC below the true value may deter some investors and therefore result in less investment taking place in the short run, but it will not be likely to cause all investors to cease providing funds. Of course, the service provider might be forced to cut back on maintenance or service quality if it perceived the return on these investments to be too low, but no evidence was advanced by Telstra that consumers' valuations of different levels of quality was asymmetric. It is possible, at least in theory, that consumers might value lower quality, or less innovation, that might follow from less than efficient levels of investment no differently than they value the surplus lost from greater-than-efficient quality, or wasteful innovation, that could arise from too much investment.

Such robust empirical approach requires a sufficiently comprehensive quantitative cost-benefit analysis solely from the perspective of consumer welfare

22. As outlined in earlier submissions on the FPP process and the High Court UBA appeal,[8] s 18 only becomes relevant after the Commission has established a plausible range,[9] having up to that point applied only cost evidence and attributes to determine the primary question: "what is the best estimate of the cost of the service, based on TSLRIC" which involves only cost attributes and not the different s 18 efficiency and LTBEU attributes. That is the approach that the Commission correctly took on the UBA IPP.

23. Having reached the point of choosing from the plausible range, the judgments call for robust empirical examination well guided by theory. That requires a quantitative cost benefit analysis: anything short of that raises the risk of error of law.

Such empirical analysis must reflect the real world costs and benefits. For example, it is generally recognised that TSLRIC overcompensates the copper network supplier and that over-compensation needs to be factored into the analysis.

24. The s 18 analysis is not limited to the structure of the TSLRIC framework, which is regarded internationally as a methodology that produces excessive returns to providers (hence the move away from TSLRIC by many other regulatory authorities). The cost benefit analysis should be based on real world considerations and not regulatory constructs. For example, the subsidy to Chorus and LFCs is factored in. Plus the fact that TSLRIC produces monopoly rents is relevant. Indeed, as noted below, there may well be evidence that the median is too high and the WACC should be set at a lower rate.

25. Relevant also are facts such as the price freeze at retail minus until December 2014.

26. A correct approach will avoid the Commission failing to deal with relevant factors such as the impact of the copper prices increasing relative to LTE price and services. The experts, Jonathan Brewer and Covec, said in their submission on the UBA Update Paper, that increasing the copper price would lead to artificial and distorted migration of customers away from copper and UFB to LTE. This has substantial distortionary effects, including on UFB update, yet it was not dealt with in the UBA IPP final determination.

27. A key facet of that LTE issue, as an example of broader considerations, is that Telecom and Vodafone benefit either way, given they can migrate a high proportion of their current copper customers to LTE. That raises barriers to entry, and erodes the continued viability of providers other than Vodafone and CallPlus. That in turn reduces competition, to the detriment of consumer welfare.

[8] See the InternetNZ, TUANZ and Consumer submission on the UCLL FPP process paper, and their and our High Court submissions

[9] The "plausible range" concept is not in the Act but it is a valuable tool used by the Commission in the UBA IPP review and is usefully used here too, so long as it is correctly used as outlined in this paragraph.

28. Competition from Orcon and CallPlus/Slingshot is seen as important by the Commission. As the Commission said in its determination clearing the Vodafone acquisition of TelstraClear:[10]

> … post acquisition, Orcon and Slingshot will continue to act as aggressive, price leading competitors in the market. While they lack the scale of Telecom or the merged entity, they are able to compete effectively, especially in areas where they have unbundled (where Vodafone's fixed network is largest). The Commission considers that, post acquisition, Orcon and Slingshot will provide competitive constraint on the merged entity.

There can be no assumption, absent specific evidence, that the overestimation of WACC leads to lesser consumer welfare outcomes than underestimation of WACC, in regulated businesses including as to UBA and UCLL

29. Assuming correct calculation of standard errors, there is a three-in-four chance that the 75th percentile exceeds the true value of WACC and a one-in-four chance that it does not. That is according to the Commission view: the IM judgment summarises the Commission's reasoning on an uplift, including:[11]

> (a) The cost of capital cannot be directly observed, but must be estimated. Estimates are subject to error. The Commission needed to apply judgement to dealing with such error.
>
> (b) It cannot be known whether an estimate is in error or not but, using statistical methods, a confidence level can be assigned to how likely it is that the true value of the WACC is above or below a particular value. For example, if standard errors are correctly calculated, there is a three-in-four chance that the 75th percentile estimate exceeds the true value of the WACC, and a one-in-four chance that the 75th percentile estimate is below the true value of the WACC.

30. Therefore, use of the 75th percentile involves the likelihood that the supplier will earn excess returns, said the IM judgment at [1460]. The IM judgment observes the following effects of that:

> [1460] If this feature of those IMs continues into future IMs, following review by the Commission in accordance with the statutory framework, the likelihood of excess returns will be permanent. There is no suggestion in the Commission's reasoning that its choice of the 75th percentile is a decision made out of caution, and to be reviewed in the light of further evidence regarding the WACC. Rather, all the Commission's reasoning points to the choice following from, in its view, unavoidable uncertainties and asymmetric costs being permanent features of the regulatory framework.
>
> [1461] This is clearly at odds with the s 52A(1)(d) purpose of limiting the ability of regulated suppliers to extract excessive profits. The Commission says as much in the Principal Reasons Papers. The question is whether this result – a likelihood – is justified by fear of failure to achieve the s 52A(1)(a) outcome of providing regulated suppliers with incentives to invest and innovate. The question is to be decided within the context of what best promotes the long-term benefit of consumers, the overriding purpose of Part 4.

31. Section 18 does not include an express reference to limiting the ability to extract excessive profits. But it is materially the same as s 52A Commerce Act, in context, as the Telecommunications Act provides that the UBA and the UCLL prices are to be cost-based and

---

[10] Commerce Commission, Determination, Vodafone New Zealand Limited and TelstraClear Limited [2012] NZCC 33, 29 October 2012.

[11] IM Judgment at [1395]

that is designed to exclude monopoly rents. Additionally, efficiencies entail restricting monopoly rents. Both purpose statements are focussed solely on consumer welfare.

32. The IM judgment lists a number of matters as to whether there should be an uplift to the 75th percentile at [1471] to [1478], which, it is submitted, the Commission should take into account. The Court then concludes at [1479], in a key passage:

> "In our view, applying the 75th percentile estimate to the initial RAB [ie, regulated asset base] is unlikely to be necessary to promote incentives to invest and innovate. Future investment choices by suppliers must rationally be influenced by expected earnings on those future investments, not by earnings on past investments. (The experience with past investments may of course be relevant to future investments, but that is another story.)"

33. Dealing with the second of the reasons for this conclusion, the IM judgment materially states:

> [1473] Secondly, it is far from obvious that higher than normal expected returns would stimulate greater efficiency of any kind. On the contrary, they would render excess profits likely, even if less effort were made by suppliers to generate efficiencies than in a workably competitive market. In monopoly enterprises, the concern is always to prevent inefficiency creeping in. Providing a revenue cushion is not the way to create the right incentives.
>
> [1474] If dynamic efficiencies are, as the Commission believes, most important, how exactly are higher expected returns supposed to stimulate them? Dynamic efficiency implies finding better ways to meet customer needs and adapting to changes in market circumstances. But necessity, not plenty, is the mother of invention. ….

34. That is an important question: "If dynamic efficiencies are, as the Commission believes, most important, how exactly are higher expected returns supposed to stimulate them?". The answer requires empirical analysis. Critically, that must include, as s 18 requires, the effect of **competition** for the LTBEU. That competition includes competition provided over copper via UCLL and UBA, and other copper services, and LTE. It includes competition provided by suppliers such as Orcon and CallPlus, which may be eliminated or eroded by an incorrect decision. All that points away from Chorus ending up with the likelihood that it will earn monopoly rents if the price is set at the 75th percentile.

35. The IM judgment also observes, in a passage pointing away from uplifting the WACC:

> [1480] The idea that greater revenues produced by higher allowed earnings on past investments (ie on the initial RAB) provide the wherewithal for more future investment is contrary to rational investment choice. Those existing higher earnings, once earned, are a given. The source of funds for future investments does not influence the riskiness of future investments; nor, therefore, does it influence their attractiveness. If anything, an abundance of capital is likely to lead to wasteful investment.
>
> [1481] Any concern about effects on investment by yet-to-be-regulated industries would seem to be misplaced. No evidence of such an effect was presented, nor evidence that regulators anywhere in the world have held such concerns. ….

The starting point is: "Given an unbiased estimating procedure by the regulator, the WACC will on average be correctly estimated over time. In contrast, if the best point estimate of the WACC is systematically increased by some arbitrary amount like one standard deviation, then in the long run cost over recovery will occur with all of its negative social consequences."

36. That quote is from [467] in the Telstra Judgment. The Tribunal continued at [468]:

> In this sense we regard an estimate of the true WACC value, if it has been arrived at through a statistically-unbiased estimating process, as representing a figure that, on average, in the long-run probabilistic sense in which all such estimates should be considered, would yield the true expected value of the variable in question. To add an amount artificially to such an estimate would in this correct statistical sense result in too high an estimate of the true average of the variable in question, in this case the WACC. We are not satisfied that such a procedure is, in any statistical or economic sense, reasonable in the present circumstances.

37. In short, there are dangers in simply increasing above the median WACC, to be avoided (especially absent clear empirical and theoretical basis).

There can be no assumption that regulators internationally favour a WACC higher than the median (and even if they did, it does not follow automatically that the WACC should be increased above the median here)

38. The IM judgment states, when dealing with an uplift of WACC over the median:

> [1477] Nor is overseas practice suggestive that such an approach has found more than narrow favour, since the only examples from the numerous regulatory decisions made every year were two relating to United Kingdom airports.

39. See also the observations of the NZ Institute of Economic Research in their submissions on the Commission's "Have your say" discussion paper (as to whether to review the WACC uplift in light of the IM judgment).

Dynamic efficiencies are not necessarily promoted by a higher WACC (they may be better promoted by a lower WACC): again, evidence and empirical analysis is required

40. See the submissions above, including for the principle: "There can be no assumption, absent specific evidence, that the overestimation of WACC leads to lesser consumer welfare outcomes than underestimation of WACC, in regulated businesses including as to UBA and UCLL".

There must be consideration, based upon factual and theoretical analysis, of a two-tier approach to WACC by which no uplift is required as to sunk investment

41. In the IM matter, MEUG put forward a two-tier approach, distinguishing sunk or committed investment from future investment. MEUG also relied upon theoretical commentary, as

outlined in the IM judgment, and there is additional relevant material in the NZIER submission on the "Have your say" discussion paper referred to above. See also the detail in the Telstra judgment at [453]-[457].

42. When commenting on the lack of evidence on the two-tier approach put forward by MEUG, the court added support for the approach (highlighting added):

> [1484] **The same difficulty [as to lack of evidence] applies to MEUG's two-tier proposal. In principle, that proposal is stronger,** because by providing the likelihood of higher than normal returns on new investment it overcomes any disincentives that may be claimed to exist (compared to the use of the mid-point); although we are not convinced as to the reality of those disincentives.

43. Copper investment is all but sunk investment. UFB investment is sunk investment or investment to which Chorus and the LFCs are irrevocably committed to. In both respects there is no valid reason for an uplift. This differs from copper investment such as unbundling, which points in fact to a reverse approach (to having a lower WACC).

44. As the IM judgment points out at [1480]:

> The idea that greater revenues produced by higher allowed earnings on past investments (ie on the initial RAB) provide the wherewithal for more future investment is contrary to rationale investment choice. Those existing higher earnings, once earned, are a given. The source of funds for future investments does not influence the riskiness of future investments; nor, therefore, does it influence their attractiveness. If anything, an abundance of capital is likely to lead to wasteful investment.

Regard must be had to the fact that nearly all of the capital invested in the UCLL and UBA networks is sunk, and therefore an uplift over the median is not required

45. See the prior principle.

Similarly, the UFB investment is an investment to which Chorus and the LFCs have already committed. Therefore there is no need for an uplift.

46. Ditto.

The regulatory and commercial framework is one which has competition from non-UFB networks at its heart, and s 18 is solely about competition in the LTBEU. That drives the s 18 approach.

47. This is clear. The regulatory regime (and the commercial regime too) has been set up deliberately so that copper provides competition to UFB. Chorus argue that this should not be so, but the fact is that the regulatory regime is specifically competition based. The Commission must implement that regime, whatever others might desire.

48. The specific nature of that regime has been outlined a number of times in submissions by CallPlus, Orcon, InternetNZ, TUANZ and Consumer, and by their experts, in the UBA IPP process.

The onus is on Chorus to show, by sufficiently robust empirical and theoretical analysis and reasons, that there should be an increase above the median. If Chorus cannot prove this, there can be no uplift.

49. This is a particularly important point. Both the IM judgment and the Telstra judgment emphasise the obligation on those seeking an uplift to prove their case. Both Telstra and MEUG lost their appeals as they did not prove their cases.

50. While the Commission should develop a quantitative CBA, it is ultimately Chorus's responsibility to prove its case. If the empirical evidence based on sound theory is not there and not put forward, the Commission must decline to allow the uplift: to do otherwise is established by the two cases as an error.

The approach must be based on a sufficiently robust statistical methodology

51. In both the judgments, the appellants did not use robust methodology and it is apparent that the court and the tribunal respectively wanted a more robust statistical approach. In the IM judgment, the Commission's use of standard errors and a percentile range was not statistically precise (see [1450] and [1451]). Similarly, the tribunal in the Telstra judgment concluded that the Telstra evidence seeking an uplift lacked factual and theoretical basis and departed from sufficiently robust methodology (see eg Para 23.4 of the Telstra judgment). The Tribunal concluded at [458], when dealing with the question of quantifying the uplift above the median:

> Even if we were minded to accept Telstra's arguments that the social costs of underestimating the WACC were so high relative to those of overestimating the WACC that an upward lift in the estimated WACC should be made to compensate for this error, the question would remain as to the method by which this compensatory adjustment should be estimated, and the way in which its quantum should be determined.

52. So, it is not enough to show that the median WACC may produce negative consumer welfare outcomes. There must be a basis, founded on empirical evidence, to show by how much the WACC needs to be increased. The Tribunal noted at [465] and [466]

> We note that neither Professor Bowman nor any other evidence presented by Telstra provided any empirical economic analysis that demonstrated the economic loss associated with a WACC that was set too low, or, that the future loss expected to be associated with a too-low WACC would in fact be ameliorated by a WACC that was uplifted by one standard deviation beyond the best estimate determined by the Commission.
>
> 466 As a matter of statistical reality, the estimate of any parameter is subject to estimating error. But these errors may not always be present in estimating each component of the WACC, and the degree of error may differ greatly as between the estimates of each separate cost component. Optus submitted that a blanket one standard deviation uplift to allow for the individual error involved in calculating each component parameter was arbitrary, in the absence of convincing evidence that an all inclusive summary error calculation was justified. We agree with this submission.

It is possible that consumer welfare is best met by a reduction of WACC relative to the median, but such a conclusion would require robust empirical evidence.

53. As it does not automatically follow that an increase in WACC is required, equally, there may be reason for a reduction in WACC relative to the median. Even the dynamic efficiency factor may lead to a reduction relative to the median, given, for example, that TSLRIC effectively builds in over recovery for Chorus, and that competition – which is at the heart of s 18 - is fostered by encouraging copper services including unbundling.