Further work on the cost of capital input methodologies:

Response to invitation to provide evidence on the WACC percentile

5 May 2014

Contents

INTRODUCTION

1. The Commerce Commission ("**Commission**") published its notice of intention to amend the weighted average cost of capital ("**WACC**") percentile in the cost of capital input methodologies ("**IMs**") on 31 March 2014. At the same time, the Commission released a process update and invitation for interested parties to provide evidence on the appropriate WACC percentile.

2. The New Zealand Airports Association ("**NZ Airports**") makes this submission on behalf of Auckland International Airport Limited, Wellington International Airport Limited, and Christchurch International Airport Limited (together, "**Airports**").

3. This submission is accompanied by the following expert reports, which form part of NZ Airports' submission:

   (a) a report by NERA Economic Consulting Limited ("**NERA**"), setting out a review of the approach to the WACC percentile; and

   (b) a report by Auckland UniServices Limited ("**UniServices**") on the cost of capital range and the factors that may be relevant to the choice of a WACC percentile.

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EXECUTIVE SUMMARY

1. In this submission, NZ Airports suggests a constructive approach for considering whether an amendment to the WACC percentile (and range) may be justified at this time. We do so because we think it is critical for the Commission to consult on an analytical framework *prior* to releasing a draft determination. We are concerned that currently the Commission does not propose to do this.

2. In our view, it is important that the analytical framework commences from the correct starting point, which is that the existing range and choice of percentile is consistent with the purpose statements in Part 4. The key question to be addressed is whether there is evidence to justify a change in percentile - that is, does evidence show that an amended IM will be materially better at meeting the relevant purpose statements?

3. In contrast, the Commission's starting point appears to be that the WACC IM should be amended unless new evidence is produced to justify the existing IM. This is not the correct approach.

4. When assessing whether an amended IM is justified, the Commission will need to consider a range of factors that is broader than the current narrow focus on the perceived correctness (or otherwise) of the range and percentile choice under the WACC IM. In particular, the Commission will need to consider how to account for asymmetric risks. Within the broader framework, we also propose an approach to analysing the question of asymmetric social costs. We also put forward examples of the type of evidence that may be relevant at each step.

5. In our view, and as we discuss below, this framework suggests that:

   (a) it is unlikely that material amendments to the WACC IM can be justified under the consultation process as currently proposed; and

   (b) providing for a WACC range for information disclosure regulation of the airport sector continues to be the best approach; and

   (c) it may not be possible to precisely quantify the optimal percentile estimate that could justify an amendment to the IMs; but

   (d) nevertheless, a range of factors provide support for retaining the use of (at least) the 75^{th} percentile WACC estimate in setting prices, and as a reference point for assessing airport profitability.

SECTION 1: ANALYTICAL FRAMEWORK

The impact of the substance of the Court's comments in the airport sector

6. We acknowledge that changes to the WACC IM for information disclosure purposes are not binding on the regulated airports. It will remain open for airports to adopt pricing approaches that they consider to be appropriate following consultation with substantial customers, and to provide additional disclosure by reporting against an alternative percentile estimate, should they choose to do so. Similarly, changes to the IMs for sectors subject to price control are not binding on the regulated airports (for either pricing or disclosure purposes).

7. However, based on our experience with information disclosure regulation to date, changes to the current IM for information disclosure regulation will likely have an impact on airport pricing, given that:

(a) In practice, airports are guided by the IMs in pricing, and it is very difficult for airports to depart from the approaches set out in the IMs given the Commission's approach to assessing airport profitability (reinforced during the section 56G review).

(b) Airlines put considerable pressure on airports in pricing consultations to follow the Commission's IMs. NZ Airports anticipates that any downward change to the current IMs would be used by the airlines as "the only acceptable approach" in pricing consultations.

(c) Changes to the Commission's current approach to the use of the 75th percentile estimate when setting price-quality paths in other regulated sectors may also lead to indirect pressure on airports to apply that approach in their own pricing decisions.

8. For these reasons, in this submission NZ Airports engages with the substance of the Court's comments on the use of the 75th percentile estimate. As we discuss below, we consider the use of at least the 75th percentile estimate of WACC in price-setting (and for assessment purposes) to be justified, and that the Commission appropriately exercised its discretion in setting this aspect of the IMs.

The search for a "precise" percentile

9. The Commission has asked interested parties to provide evidence justifying the use of the 75th percentile estimate of WACC in the cost of capital IMs, or credible evidence in support of the use of a different percentile.

10. Although NZ Airports supports the use of evidence-based approaches to inform the Commission's various regulatory tasks, including the determination of input methodologies, this is fundamentally the wrong question. In circumstances where the IM has been set and then upheld, the proper question is whether there is probative evidence to support a change to the IM.

11. It is also important to remember that estimating WACC (and applying the resulting WACC estimates to assess profitability) is an inherently uncertain and imprecise task. In many cases, empirical evidence will not be able to point the Commission to a single "correct" answer.

12. For example, the High Court has accepted that the formulas that make up the WACC IM give an appearance of mathematical precision when the reality is far from that. The Court acknowledged that the parameters reflect estimation processes of varying degrees of complexity, and can only be determined based on a range of judgements, the validity and appropriateness of which are open to debate.[1] The Court went on to note that precision in determining WACC is an elusive and perhaps non-existent quality, and that setting WACC is more of an art than a science.[2]

13. A range of different approaches and views may be valid when considering particular WACC issues (including the appropriate percentile estimate). At all times, error, imprecision, and uncertainty are inherent features of the process. In these circumstances, the Commission will ultimately be required to exercise its judgement in a way that best promotes the purpose of Part 4 regulation, in light of the available theory, empirical evidence, and underlying commercial and market realities.

14. The selection of an appropriate percentile estimate or range for a particular purpose is no different. As discussed by NERA, the Commission must be mindful that there are considerable difficulties in attempting to select an "optimal" percentile estimate. No (reasonable) empirical

[1] *Wellington International Airport Limited v Commerce Commission* (2013) NZHC 3289 ("**IM Judgment**") at paragraph 1188.
[2] IM Judgment at paragraph 1189.

analysis will be able to arrive at a definitive point estimate of the optimal percentile for a single firm, let alone an industry.[3]

15. In this context, we are concerned that the current exercise may become an unhelpful search for precision that does not exist, with a disproportionate focus on empirical precision compared to other key IMs for which the Commission has exercised judgement to determine. These concerns are currently exacerbated by the absence of a clear analytical framework for considering:

(a) whether an amendment to the current approach is required or justified;

(b) how the costs and benefits of the various different alternatives may be examined in order to inform the choice of percentile estimate; and

(c) the strengths and limitations of attempting to precisely quantify the "optimal" percentile.

16. Further, NZ Airports considers that it is inappropriate to attempt to examine one element of the WACC estimate in isolation, in an extremely rushed timeframe. In our view, this process does not provide sufficient time for robust consideration of the issues that are involved, and we are particularly concerned the Commission has decided that it should consider the percentile issue separately from a full review of the cost of capital IMs (outside of the statutory timeframe for the full review).

17. As advised by NERA, a more useful objective at this stage may be for the Commission to explore the envisaged framework, and aim to identify, among other things, the degree of confidence the Commission expects to be able to achieve through its analysis.[4]

The importance of a clear analytical framework

18. In this context, NZ Airports considers that it is important to determine a clear analytical framework**.** As such, we encourage the Commission to develop and consult on its analytical framework before releasing its draft determination, including developing a framework for evaluating the issues, identifying what factors are to be included in the analysis, and setting out how the different qualitative and quantitative evidence will be considered to determine whether an amendment is justified. Not doing so would be a significant departure from previous practice when consulting on IMs.

19. It is only once this framework has been clearly set out that targeted and relevant evidence can be provided, and further evidence gathering and analysis can be carried out as required. If the Commission chooses not to set out its proposed analytical approach in advance of its draft determination, it should anticipate that it will need to allow for interested parties to provide further evidence once the proposed evaluative approach has become clear.

20. If the Commission decides to amend the IM, it will need to do so on the basis of probative evidence. That evidence will need to justify the new IM as being superior to the existing IM.

21. In our view, properly considering whether there is such evidence suggests an analytical framework that steps through the following points:

(a) What is the nature of the Commission's power to amend the WACC IM outside of the scheduled statutory seven-year reviews? What impact do the Court's comments have on whether it is appropriate to exercise this power?

3 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 38.
4 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 38.

(b) What is the rationale for the current WACC IM for each regulated sector? Drawing on the above, what factors (both quantitative and qualitative) inform the selection of a percentile estimate (or the specification of a range) for particular regulatory purposes?

(c) What effect do the Court's comments have on the rationale identified above? For the airport sector in particular, how do the Court's comments about asymmetric social costs impact the setting and use of a WACC range for information disclosure and analysis purposes?

(d) What is a sensible framework for thinking about the potential asymmetric social costs of under-estimating WACC? What happens if the empirical analysis contemplated by the Court does not prove to be possible in practice, or does not lead to a precise percentile estimate?

(e) Given the above, is there sufficient evidence to justify amendments to the current WACC IMs?

22. We address these points in the following sections.

SECTION 2: THE COMMISSION'S POWER TO AMEND

23. The Commission's power to amend the IMs differs considerably in nature from its task at the time of the seven-year scheduled review. NZ Airports accepts that it is open to the Commission to make amendments to its IMs outside of the seven-year reviews. However, the prospect of significant and material changes being made through amendments is of great concern.

24. As discussed in our prior submission, this prospect will drive considerably greater uncertainty for investors and suppliers in the present circumstances than any uncertainty that may have been created by the Court's comments themselves (which we consider the Commission has overstated, without reference to evidence, in support of its assertion that material uncertainty currently exists).

25. In this context, it is important to have proper regard to the statutory provisions that guide the exercise of the Commission's power to amend an IM. In the context of a one-off amendment to an IM, the question for the Commission is whether an amendment would better promote the purpose of Part 4, the purpose of IMs, and the purpose of the particular regulatory instrument (ie, the purpose of information disclosure regulation for airports). We return to these questions in the analytical framework set out below.

26. For present purposes, it is sufficient to say that in the absence of compelling evidence demonstrating that the existing IM is flawed, we do not consider that making changes to the WACC IM now would be an appropriate exercise of the Commission's power to amend the WACC IM for airport services. Otherwise, the critical purpose of IMs in providing certainty about the regulatory rules and processes would be undermined (particularly when the current IM was expressly upheld by the Court).

27. The IMs do not just provide certainty on the subject matter of the regulatory rules and processes themselves. They also provide critical certainty that these regulatory rules are not going to be subject to unanticipated material change. In the absence of clear evidence that an IM (or an aspect of that IM) is in error, the statutory framework contemplates that the appropriate time to consider whether substantive changes may be required is during the scheduled review of the IMs. In this context, we note that the Commission's motivation for considering an amendment was that uncertainty was undermining incentives to invest (denied by virtually all regulated suppliers). The Commission's motivation was **not** that there was an

error in the IM. Nor is there any evidence to suggest any such error exists. The Court expressly recognised that its comments were made in the absence of any supporting evidence, and that the outcome of any further empirical analysis that is undertaken may confirm the Commission's current approach.

28. This statutory review process anticipates that there may be events that take place across the seven-year IM period that may warrant the Commission to check whether its IMs are still providing the right incentives to regulated suppliers in order to promote the long-term benefit of consumers. However, the legislative framework does not provide that amendments should be immediately contemplated, outside this scheduled process, wherever the Commission or interested parties (for whatever reason) suspect that an IM could be different in the future.

29. In our view, the legislative framework suggests that the Commission's power to amend an IM outside of the seven-year review should be exercised very rarely. NZ Airports does not consider that this is one of those times. As we noted in our first submission, the Commission has previously recognised this distinction, noting that amendments to its determinations (under the Commission's power to amend and/or clarify determinations) should be generally avoided.[5] NZ Airports continues to consider that there is nothing in the Court's comments to suggest that the review of the WACC IM needs to be brought forward, or that an amendment is urgently required.

30. In light of these factors, the appropriate time to consider whether changes may be required to the WACC IM (and to gather the evidence necessary to consider that question) is during the full seven-year review of the IMs required by the Act. Doing so provides the best opportunity to consider the effect of any changes to the WACC IM in totality, and for a robust consideration of the potential interactions between the percentile estimate issue and the other elements of the WACC IM in a way that is appropriately evidence-based (and does not rely on arbitrary assumptions that there are no interactions or interdependencies that require consideration).

SECTION 3: THE RATIONALE BEHIND THE WACC RANGE AND THE USE OF THE 75TH PERCENTILE

31. NZ Airports considers that the use of a WACC IM for the airport sector risks creating a misleading headline figure that is given an undue sense of precision and rigour by interested parties. In our view, the WACC IM assumes an undue prominence in disclosure reporting, analysis, and airline views and which may create a perception that airports are required to conform to a single, "correct" view of acceptable performance. The use of a WACC range to monitor profitability, extending to at least the 75th percentile, is an appropriate attempt to mitigate these very real concerns.

32. The WACC IM for airport services currently requires the Commission to determine a mid-point estimate of WACC, as well as a range using the 25th to 75th percentiles. This provides the Commission and interested parties with some information that can be used (along with other relevant factors) to guide an assessment of airport returns on both a forward-looking and historic basis.[6]

33. It is not precisely clear what the Commission means when it suggests there may be changes to the WACC percentile values that are published for information disclosure purposes as a result of the Court's comments. In particular, it is not clear whether the Commission may be considering removing the publication of a range in the first place, or whether it proposes to consider changing the percentile values that are published as part of that range.

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5 Commerce Commission *Process for amendments and clarifications of Part 4 determinations*, 8 March 2011 at paragraphs 4-9. See NZ Airports *Response to invitation to comment on whether the Commission should review or amend the cost of capital methodologies*, 13 March 2014, at paragraphs 18-26.

6 For the avoidance of doubt, NZ Airports continues to consider that there will be times when the appropriate range for assessment purposes (for both forward-looking and historical assessments) may extend above the 75th percentile estimate.

34. As will be clear, we consider that the rationale for the current approach to the use of a WACC range and a percentile estimate above the mid-point for regulatory purposes remains fundamentally sound (albeit, as argued throughout the development of the IMs, the values chosen are conservative).

35. In terms of the use of a WACC range, we note that:

(a) The Commission intended the use of a WACC range to recognise that estimating WACC is prone to error, and that there will be natural fluctuations and uncertainties in attempting to precisely measure and monitor airport returns.[7] The Court's decision does not undermine or call into question the Commission's reasoning in this respect. In fact, the judgment expressly endorses the Commission's current approach for the airport sector.

(b) The Commission is not required to use a single point-estimate in its analysis of airport performance. Nor should it strive to do so. The use of a WACC range for airports, for both disclosure and analysis purposes, is the best way to recognise that:

(i) The Commission cannot be certain what the "true WACC" is for the airport sector, nor for an individual airport.

(ii) There is considerable uncertainty associated with estimating WACC, as well as with the measurement of airports' actual levels of profitability.[8] Returns in competitive markets often fall below or exceed the mid-point of the cost of capital. In addition, profitability measures can fluctuate considerably over time.

(iii) It is for each airport to determine the appropriate WACC estimate to use as part of its individual pricing decisions, following appropriate consultation with its customers. It is not the function of information disclosure regulation to attempt to prescribe such a percentile estimate, and it would be inappropriate if the WACC IM attempted to define the appropriate percentile for price-setting purposes.

(iv) As the Commission is aware, airport pricing decisions are a complex interaction of factors, where the final outcome reflects commercial decisions that do not necessarily align to the product of a strict building blocks pricing model.

(v) There is no single correct level of an acceptable return for an airport business (or for all airport businesses). Instead, a range of outcomes may be consistent with those in workably competitive markets. The appropriate range of returns in any particular circumstance will depend on a number of contextual factors that fall to be considered on a case-by-case basis.

(c) In these circumstances, it is a matter of judgement as to the appropriate range of the cost of capital to be applied in assessing airport profitability (as previously noted by the Commission).[9]

(d) In the Court's view, providing for airports to disclose returns by reference to the current WACC range reflects the reality that estimating WACC is "a complex task

[7] Commerce Commission *Input methodologies (airport services) reasons paper*, 22 December 2010 ("**IM Reasons Paper**") at paragraphs E11.54-11.60

[8] IM Reasons Paper at paragraph E11.59.

[9] IM Reasons Paper at paragraph E11.58.

involving significant exercising of judgement and is open not only to the possibility of error, but also to there being a range of views".[10] It considered the current approach to the range would provide an appropriate level and range of information to interested persons consistent with the purpose of information disclosure as set out in the Act.[11]

36. In terms of the rationale for the 75th percentile in particular (both as part of the WACC range, and in terms of its appropriateness as a reference point for considering airport profitability):

(a) The choice of the 75th percentile reflects, in part, the Commission's judgement that there is considerable uncertainty involved in producing estimates of WACC, and that it would rather adopt an approach that reduces the possibility of under-estimating WACC. This is a perfectly acceptable way to promote and balance the considerations in limbs (a) and (d) of the Part 4 purpose statement.

(b) However, the choice of a percentile estimate for a particular regulatory purpose is also informed by a broader range of factors. As discussed in our previous submission, the Commission has previously expressed a range of views about the use of a percentile range, and of the rationale for the use of the 75th percentile in particular. This rationale has included:

(i) uncertainty about the unobservable, "true", WACC;[12]

(ii) the choice of model used in the WACC estimation;[13]

(iii) the error between the (unknown) best approximation of a parameter estimate and the true value of that parameter;[14]

(iv) general concepts of risk allocation between suppliers and consumers;[15]

(v) provision for asymmetric risks, including from catastrophic events;[16]

(vi) variations between regulated suppliers within a particular sector (including variations in the systematic risk of those suppliers);[17] and

(vii) the social consequences of over and under-investment.[18]

(c) As advised by NERA and UniServices, the choice of a percentile above the mid-point is, in part, to adjust for any bias inherent in the Commission's methodology (as well as to ensure that, on balance, the WACC estimate is less likely to be below the true cost of capital).[19]

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10 IM Judgment at paragraph 1490.
11 IM Judgment at paragraph 1491.
12 IM Reasons Paper at paragraph E11.3.
13 IM Reasons Paper at paragraph E11.5.
14 IM Reasons Paper at paragraph E11.5.
15 IM Reasons Paper at paragraph E11.5.
16 Commerce Commission *Setting the customised price-quality path for Orion New Zealand Limited: Final reasons paper* [2013] NZCC 21 (29 November 2013) at paragraphs C25-29.
17 Commerce Commission *Christchurch Airport section 56G conference transcript*, 24 May 2013 at page 60 (per Commissioner Duignan).
18 See, for example, the Wellington Airport final section 56G report, where the Commission noted that the 75th percentile estimate "allows for the uncertainty of estimating the true cost of capital and in light of the direct consequences of estimation error on pricing and investment": Commerce Commission *Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Wellington Airport: Section 56G of the Commerce Act 1986*, 8 February 2013 at paragraph E31.
19 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 22; UniServices *Comment on "Further work on the Cost of Capital Input Methodologies Commerce Commission invitation to provide evidence on the WACC percentile"*, 1 May 2014.

37. As will be clear, in the absence of separate adjustments to the WACC IM or to the Commission's assessment approach to account for these factors, we consider that this rationale continues to support the current approach to the use of a WACC range and a percentile estimate above the mid-point for regulatory purposes.

38. For example, as advised by NERA, recognising that airports bear (and should be compensated for) risks that are not reflected in the regulated WACC translates into assessing profitability with reference to a WACC range that extends above the midpoint of the WACC estimate.[20]

SECTION 4: THE EFFECT OF THE COURT'S COMMENTS

39. The Court's comments and the current consultation appear to be limited to the consideration of social consequences of over and under-investment. Given that this forms only one element of the Commission's stated rationale for the use of the 75th percentile estimate, NZ Airports considers that concentrating solely on the question of asymmetric social consequences approaches the issue from a perspective that is inappropriately narrow.

40. Doing so fails to recognise that a wide range of factors (including those listed above) provide support for the establishment of a WACC range, and for the choice of a percentile estimate above the mid-point. Any analytical framework should therefore acknowledge that these factors tend to provide support for the Commission's current use of the 75th percentile (and may justify a point-estimate above that value in some circumstances). This point is discussed further in the attached report from UniServices, at sections 3 and 4.

41. As will be apparent, NZ Airports considers that there are likely to be a number of limitations in an analysis that focuses solely on whether the quantification of asymmetric social consequences can provide precise support for a particular percentile estimate. In addition to the issues discussed above (which support a more full consideration of the rationale for the WACC range and use of the 75th percentile):

(a) The presence of asymmetric social costs in regulated sectors is a very real concept, as discussed by NERA. However, in our view (supported by the views set out in NERA's report) it may not be possible to accurately quantify the long-term costs of getting the WACC estimate wrong. It is almost inevitable that qualitative judgement will be required. In these circumstances, NZ Airports questions whether the Court was right to suggest that empirical evidence would be required to accurately justify the choice of percentile estimate. In our view, the considerable assumptions and uncertainties involved mean that any attempt to do so will only add to the false sense of precision already surrounding WACC.

(b) There are likely to be considerable further difficulties with conducting an empirical analysis to attempt to identify the "optimal" percentile for any particular regulatory purpose. This is because there are many different ways to think about social costs and benefits, and where the optimal balance may lie to promote desired outcomes. As a result, any such exercise is likely to be subject to extensive debate and a wide range of valid views.

(c) In addition, the relationship in question is not a straightforward factual/counterfactual scenario involving the comparison of two clear-cut alternatives. As the Commission will be aware, there is a complex interaction between WACC estimates and investment outcomes (particularly in the airport sector where pricing and investment decisions also reflect considerable commercial

20 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 24.

pressures explored through the pricing consultation process with substantial customers).

(d) If the use of the 75th percentile is changed on the basis of empirical analysis that is narrowly focused on the asymmetric losses associated with setting the WACC higher or lower than the cost of capital, the Commission would need to revisit the wider WACC methodology.[21] This is particularly important given that, as advised by NERA, any review process that does not allow for full consideration of the relevant issues risks increasing the perceived regulatory risk associated with the Part 4 regime, and could result in an inadvertent increase in the true cost of capital for regulated firms.[22]

42. In our view, these factors highlight that the concept of asymmetric social costs is properly seen as just one limb in the overall consideration of whether an amendment to the IM is justified. Attempting to quantify this concept should not be the sole or driving consideration (as the current consultation appears to contemplate).

43. However, it appears that attempting to quantify the concept of asymmetric social costs will continue to assume a great deal of importance in the current consultation for the Commission and for interested parties seeking to demonstrate that the use of the 75th percentile is not justified. Although we consider this type of approach needs to be treated with caution, we nevertheless suggest a potential framework for thinking about asymmetric social costs in a constructive manner in the following section.

44. Once this framework has been clearly set out, targeted and relevant evidence can be provided, and further evidence gathering and analysis can be carried out as required. If the Commission chooses not to set out its proposed analytical approach in advance of its draft determination, it should anticipate that it will need to allow for interested parties to provide further evidence once the proposed evaluative approach has become clear.

45. This position is supported by NERA, who note that the Commission's proposed timetable is unlikely to provide sufficient time to develop a robust framework for analysing the issues, identify the relevant data and assumptions, and undertake the analysis in a transparent manner.[23]

SECTION 5: A SENSIBLE FRAMEWORK FOR THINKING ABOUT THE POTENTIAL ASYMMETRIC SOCIAL COSTS

46. In our view, a constructive framework for addressing the Court's comments in relation to asymmetric social costs, within a broader consideration of whether an amendment to the WACC IM is required, would involve the following steps:

(a) Recognise (upfront) the limitations of quantitative analysis. In that context, be clear about what further empirical analysis is expected to demonstrate, and the degree of confidence that can placed on the results.

(b) Consider the range of consequences that might result if the WACC estimate is set too high, or too low.

(c) Identify the costs and benefits of the different alternative consequences.

(d) Assign a value to each of those costs and benefits.

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[21] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 40.
[22] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 40.
[23] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 38.

(e) Determine how trade-offs should be made between the costs and benefits to consider the overall social costs.

47. We expand below.

What are the limitations of the analysis?

48. As we have discussed previously, it is important to avoid searching for false precision when estimating WACC given that courts, regulators, academics and practitioners recognise that doing so is an art rather than a science.[24] We recognise that the IM must be as robust as possible and that some approaches are better than others at meeting the purpose statement (as argued by airports in the merits review), but we caution against seeking to make isolated changes to the IM on the basis it will produce a more "correct" estimate of WACC. As argued in the merits review proceedings and explained elsewhere in this submission, it is the cumulative effect of the parameters and the robustness of the overall estimate of WACC that is most important in terms of promoting the purpose statement.

49. The Commission's experts have also advised that the tools the Commission must use in estimating the cost of capital are imperfect, and often require compromises and adjustments. There is no one approach that produces a final and correct answer.[25] All models used to estimate the cost of capital are imperfect tools, and judgement is unavoidable in their application.[26] In addition, one of the Commission's expert advisors has previously expressly noted that there is an inability to formally account for all sources of uncertainty in estimating WACC, and some qualitative recognition of these additional sources should accompany the Commission's WACC estimate (in addition to its current standard deviation approach).[27]

50. As recognised in a recent independent expert report prepared by Grant Samuel (in relation to the Future Fund's offer for stakes in highly relevant airport assets in Australia), there are dangers in a "mechanistic application of formulae" derived from theory. The report goes on to note that theoretical models should not be relied on as producing a single truth, noting that: [28]

> The discount rate represents an estimate of the weighted average cost of capital ("WACC") appropriate for these assets. [...] In selecting the discount rate range, we utilised the capital asset pricing model ("CAPM") as the starting point in our analysis to determine a cost of equity. **However, it is easy to credit the output of models with a precision it does not warrant. The reality is that any cost of capital estimate or model output should be treated as a broad guide rather than an absolute truth. The cost of capital is fundamentally a matter of judgment, not merely a calculation.** [Emphasis added].

51. In addition, the Australian Productivity Commission recently recognised that the extensive processes conducted by the Australian Competition and Consumer Commission to estimate WACC as the regulator for a number of industries demonstrate that the process is often much more "art than science".[29]

52. In this context, NZ Airports submits that:

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[24] See, for example: IM judgment at paragraph 1189, Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology*, 18 December 2008 at paragraphs 3-4, 16-19, 149.

[25] See eg Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology*, 18 December 2008 at paragraph 3-4.

[26] See eg Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology*, 18 December 2008 at paragraphs 16-19.

[27] Franks, Lally and Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology*, 18 December 2008 at paragraph 149, recommendation 51.

[28] Grant Samuel Australian Infrastructure Fund Proposal, Appendix 1: Selection of Discount Rate, 7 December 2012 at page 1. (The full Grant Samuel report is available as Annexure 1 in Hastings Funds Management, AIX Notice of EGM and Explanatory Booklet, 12 December 2012, available at http://www.hfm.com.au/asxlisted/funds/aif/reports/).

[29] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 128.

(a) The choice of a WACC range is not a precise tool for deriving a WACC. We have always valued the use of the 75^{th} percentile as a compensatory measure to reflect that there are various places for error in the Commission's WACC estimation and profitability assessment approaches, as well as a recognition that a range of outcomes may be appropriate in workably competitive markets. We have viewed the choice of percentile to be mostly a qualitative judgement that contributes to producing an estimate of WACC that is closer to (but still below) a commercially realistic cost of capital for the airport sector.

(b) Seeking to empirically quantify the choice of percentile, as noted by NERA, will involve complex, uncertain and data intense analysis, which is likely to be controversial, and which to their knowledge has never been undertaken before.[30]

53. In these circumstances, and given that the existence of asymmetric social consequences is beyond dispute, we encourage the Commission to think carefully about the considerable limitations in seeking to derive a precise empirical answer, within an otherwise imprecise model, before deciding whether to proceed with such an approach. As also noted by NERA, if the Commission does choose to proceed, it will need to reconsider the timeframe and process for consultation, which is far too short to allow robust consideration of the difficult and complex issues.

What are the possible consequences if the WACC estimate is wrong?

54. If the Commission elects to proceed with quantitative analysis to attempt to select a precise "optimal" percentile, it will need to identify all of the costs (or social loss) of getting the WACC estimate wrong.

55. Any regulatory WACC estimate will carry an inherent risk of under-estimating the "true" WACC of regulated businesses by an indeterminate amount. In an information disclosure context, this translates to a risk that the regulatory WACC may wrongly contribute to an assessment that an airport is likely to earn excess profits when that is not in fact the case (ie if the WACC IM is "too low"). In addition to the possibility that this may lead to increased regulatory control being imposed where that is not justified,[31] these risks may in turn impact on airport pricing.

56. As advised by NERA:

(a) This can result in social losses by leading to prices and investment incentives that deviate from socially "optimal" levels.[32] For example, as the Commission has previously noted, if a supplier was to reduce prices as a response to an incorrect indication of excessive profitability, this might prevent the supplier from attracting sufficient capital to undertake efficient investment.[33]

(b) Investment decisions are likely to be more sensitive to movements in the regulated WACC away from the cost of capital in a downward direction, as opposed to an upward direction.[34]

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[30] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 31.

[31] See, for example, Lally in the Gas Authorisation process, who noted that: "In the context of assessing excess profits, it would be appropriate to choose a WACC value from above the 50th percentile (this margin is denoted type 1), because the consequences of judging excess profits to exist when they do not are more severe than the contrary error. In particular, judging excess profits to exist when they do not leads to unnecessarily incurring the direct costs of control (implementation and monitoring costs), damage to the Commission's credibility, and the *possibility* that price control leads to prices that are controlled at too low a level to encourage the gas pipeline businesses to replace assets or expand their networks. The contrary (but less serious) risk is that control is not imposed when it should be; consumers are then charged too great a price and businesses using gas as an input face a cost burden that they may not be able to pass through."

[32] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014.

[33] IM Reasons, paragraph E11.51.

[34] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 17.

(c) The deadweight loss associated with setting the regulated WACC above the cost of capital would be unequivocally smaller than the loss associated with setting the regulated WACC below the cost of capital.[35]

57. By definition, if prices are set at a level that does not allow the recovery of an airport's cost of capital, that airport will not invest. In practice, the link between WACC and investment is more complex, but there are a number of ways in which investment incentives may be adversely affected if prices are set too low in response to a regulatory WACC that under-estimates the "true" WACC for an airport business.

58. In some cases, investment might not proceed. In other cases, investment may be delayed and introduced after the point that it would be optimally beneficial to do so. In some circumstances, investment may occur at a lower quality or at the "lowest cost" option, even if that level of quality or that cheapest option is not necessarily the most efficient for the wider aviation industry and/or the downstream suppliers in the airport value chain (including airlines, freight forwarders, Customs, and MPI officials). This may also result in investment decisions that are not the most economically productive for New Zealand's wider economy.

59. All of these options may lead to sub-optimal long-term outcomes for consumers. In our view, it is important that regulated airports continue to invest in the right ways to maximise benefits to consumers and New Zealand. If the regulatory framework distorts the incentives that airports face to do so, this is likely to be detrimental to the long-term interests of airport consumers and the outcomes that would result in workably competitive markets.

60. As discussed by NERA, identifying the social loss relationship from this point is likely to require a number of stages, including the development of a framework for assessing the nature and magnitude of the social costs and benefits.[36] NERA suggest that doing so will involve specifying:[37]

(a) which costs should be included;

(b) which benefits should be included;

(c) how these will be measured; and

(d) how non-financial costs and benefits will be translated into comparable financial terms.

61. Drawing on our experience in the airport industry, NZ Airports provides some preliminary discussion of these points below.

What are the costs and benefits of the different alternative consequences?

62. Attempting to answer this question will require consideration of both *whose* costs and benefits are important, and *what types* of costs and benefits are relevant. NZ Airports acknowledges that these issues are likely to be subject to debate as the analytical framework is developed in more detail. However, we set out our initial views on these questions below.

(a) **Whose costs and benefits are important?** It is clear that "consumers" are the focus of the wording of Part 4 of the Act. This directs the focus to the ultimate consumers

[35] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 17.
[36] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 32-33.
[37] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 33.

of airport services (passengers and freight owners), although the costs and benefits of intermediate consumers will also be relevant to the analysis.[38]

However, a robust cost/benefit analysis extends to a broader range of interests, particularly for the airport sector. It is critical that any such analysis extend to the role that airports play in the wider economy, given the crucial contribution of the airport sector in facilitating economic productivity (including enabling and facilitating tourism and international trade). This is particularly the case given the importance of strong international connections to the government's key strategic aims of growing New Zealand's trade and investment relationships.[39] It is also important to consider the role that airports play in connecting individuals, families, and communities from different locations.

As discussed by NERA, an important part of considering the nature and magnitude of the social costs and benefits will be taking due account of the indirect benefits or losses to the wider New Zealand economy. Airports make a significant contribution in this respect, and assessing the social losses associated with misspecifications in the WACC estimate will need to carefully consider the implications that may arise if airports are not sufficiently incentivised to invest and innovate in the provision of infrastructure.[40]

For example, the Australian Productivity Commission notes that an economically efficient firm is one that uses land, labour, capital and other resources in a way that generates the greatest possible value for the community as a whole - including workers, investors, consumers, taxpayers and others affected by its activities.[41] This concept provides a useful benchmark against which to appraise the performance of firms, and whether intervention (in the case of the current consultation, this can be characterised as "change to the regulatory approach to WACC") may be warranted to improve outcomes.[42]

(b) **What types of costs and benefits will be relevant?** The costs and benefits that inform a consideration of the social consequences involved in under or over-estimating WACC will vary considerably depending on the regulated sector being considered.[43] For the airport sector, this will likely involve weighing up the possibility that consumers might pay too much, against the benefits delivered by efficient investment in the airport sector (or costs if investment is sub-optimal).

For consumers, efficient levels of investment in airport services delivers numerous benefits, including:

(i) reductions in the time of travel (including reduced processing times for passengers, improved baggage delivery systems, and quicker turnaround times for flights), delivering greater benefits for both airports and airlines;

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[38] As we discuss further below, when considering the trade-offs between various costs and benefits, NZ Airports considers that the interests of ultimate consumers should be given greater weight than those of intermediate consumers such as airlines and freight forwarders.

[39] See, for example, the NZ Inc strategies, available at http://mfat.govt.nz/NZ-Inc/1-About/index.php. We also note that a recent working paper by the New Zealand Productivity Commission (2014/01) reveals that "over half of the productivity gap relative to the OECD average can be explained by weaknesses in in our international connections. NZ firms face reduced access to large markets and limited participation in global value chains, where the transfer of advanced technologies now often occurs"

[40] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page at 34.

[41] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 64.

[42] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 64.

[43] See, for example, the comments of Professor Bowman at the Commission's WACC conference during the development of the IMs, cited in the IM Judgment at paragraph 1467.

(ii) the ability of increases in airport capacity to enable airline competition and attract new airlines, leading to reductions in the cost of travel for consumers and increases in destination choice;

(iii) the quality of airport services, including the quality of passenger experience (including features such as ambience of the airport environment, ease of way finding, connectivity between terminals and flights);

(iv) industry and network efficiencies for consumers of airport services (for example, airport investment can affect performance and outcomes for airlines, customs and MPI officials, and well-designed investment can drive efficiencies and tangible benefits for these key links in the aviation value chain); and

(v) the safety and security of airport services.[44]

Any approach that risks distorting investment incentives risks affecting these elements in a way that is detrimental to consumers, and which will need to be reflected in any assessment of the social costs involved in selecting an estimate of WACC in the face of considerable estimation uncertainty.

In terms of the wider benefits currently delivered by airport services, a number of additional factors will need to be identified, valued and weighed in performing a robust cost/benefit analysis. For example, the regulated airports (and New Zealand's airports more generally) enable important international and domestic connections that facilitate a number of broader economic activities. In particular, these airports provide a critical link in driving value in the key tourism and international trade markets, as we discuss further below.

How can a value be assigned to each of those costs and benefits?

63. Considering how to assign a value to each of these costs and benefits is likely to be complex. For example, the materials cited by the Commission in its initial discussion paper suggest that a cost/benefit analysis should attempt to quantitatively predict each cost and benefit variable (both its current and future values), and should then attempt to convert each of these values into monetary terms.[45]

64. In our view, it will be an extensive process to figure out whether this task is feasible and, if so, what the value ultimately assigned to each variable is. This process may prove to be impossible in practice. In any event, if the Commission proceeds down this route, it will require considerable further analysis and evidence to do so.

65. At a high level, NZ Airports makes the following observations about the quantification of the costs and benefits described above:

(a) Attempting to assign a value to "consumers might pay too much" is complex. In our view, there are real doubts about whether the likelihood of prices being too high can be quantified, particularly given that:

(i) Terms such as the "75th percentile" or the "50th percentile" are shorthand form of reference that are not statistically precise. As recognised by the

[44] Which will also be influenced by the regulatory framework under the Civil Aviation Act.

[45] Boardman A., Greenberg D., Vining A., Weimer D., Cost-Benefit Analysis: Concepts and Practice (2011, 4th ed) Prentice Hall.

Court, it is clear that the precise likelihood that the use of the 75th percentile may overstate the true, unobservable WACC cannot be estimated.[46]

(ii) In other words, attempting to quantify the "costs" involved in any cost/benefit analysis does not involve a comparison of expected returns at the 75th percentile estimate to expected returns at the 50th percentile estimate. Any attempt to present this as the potential "cost" of a WACC that is "too high" would be an incorrect and misleading attempt to quantify the costs involved.

(iii) There has, to date, been no analysis of actual historical data for the airport sector. The only analysis of profitability and investment has been on a forecast basis, in relation to the prices set for each airport for the current five year pricing period. In the absence of any analysis of actual data, the Commission has no evidence that the current approach in the IMs (and its analytical framework for assessing forecast profitability) is leading to inefficient investment or excess returns.

(iv) Airport charges make up a very small part of the cost of travel for the ultimate consumers of airport services (ie passengers and freight owners). It could be expected that increases in airport charges would affect these ultimate consumers, but it is by no means clear that this involves a simple cost pass through relationship. Similarly, the reciprocal relationship is also complex, and it is not clear that reductions in airport charges would be passed through to ultimate consumers on a straight-line basis.

(b) As discussed above, investment and innovation in the delivery of airport infrastructure and services generates a wide variety of benefits to consumers. The risk of distorting incentives to invest and innovate, and the likelihood and costs of potentially putting these benefits at risk, should be factored into an analysis of asymmetric social costs. At a high level, NZ Airports notes that:

(i) Investment and innovation that is likely to result in fewer cancellations and diversions (for example, by reducing disruptions caused by low visibility) will generate significant benefits for both airlines and consumers.

(ii) Investments that improve turnaround time (such as reducing ground and airborne delay for aircraft, increasing processing speed of passengers and baggage) will provide considerable value.

(iii) The ASQ survey results since the introduction of information disclosure regulation show that passengers place great value on factors such as ease of way-finding around and airport, as well as the overall airport experience and ambience. These are clearly benefits for consumers, and will need to be incorporated into an analysis of social costs.

(iv) In addition, increases in destination choice and/or frequency of services from capacity growth will need to be carefully factored into any analysis. Similarly, the ability for airport investments in capacity growth to enable increases in airline competition on particular routes (which in turn provides valuable benefits for passengers) will need to be considered.

[46] See eg IM judgment at 1450-1452.

Quantifying the benefits to consumers from investment in capacity and service quality (including those of the type discussed above) is likely to be demanding. For example, if average processing time is reduced by 10 minutes, the consequential benefits are diverse and extensive, which will require a great deal of analysis. In addition, the Commission will need to carefully consider how to measure and value the very significant qualitative benefits that investment and innovation provides passengers.

(c) Investment in airport services plays a crucial role in ensuring that New Zealand's airports continue to deliver economic benefits for local, regional and national economies. For example, a recent study by Market Economics concluded that airports make a substantial contribution to New Zealand's economy through the provision of airport activities, the contribution of the wider airport environs, and the enabling of connections that allow and facilitate tourism and international trade. This study found that activities associated with all airport operations in New Zealand contribute $39.1 billion to the national economy, with this figure increasing to $48.7 billion when the wider airport environs are taken into account.[47]

As is to be expected, the three regulated airports deliver the majority of these economic benefits for the wider economy. For example, the Market Economics study demonstrates that Auckland, Wellington and Christchurch Airports together:[48]

(i) support 21,198 jobs in airports and aviation;

(ii) contribute $4.148 billion of economic output directly associated with airport operations and aviation activities; and

(iii) contribute $3.186 billion to the national economy by way of value added, with $1.983 billion of this directly associated with airport operations and aviation activities.

These New Zealand results echo international findings such as the recent report "Aviation: Benefits Beyond Borders",[49] which found 58.1 million jobs supported by aviation worldwide (2012), a $US2.4 trillion global economic impact (including direct, indirect, induced and tourism catalytic) and 3.4 percent of global GDP supported by aviation.

The full reach of the benefits airports provide to the wider economy will need to be carefully considered if the Commission is seeking to quantify the asymmetric social costs involved in missestimating WACC.

(d) The Australian Productivity Commission has recently considered the complexities in analysing the extent to which increases in aeronautical charges impact on the welfare of society as a whole. In its 2012 report, the Productivity Commission stated that:[50]

> [...] it is important to note that airports do not provide air services to passengers directly. Rather, they provide services that airlines rely on to provide their own services to passengers. The extent to which increases in aeronautical prices impact on the welfare of society as a whole depends (at least in part) on the airlines' response to such increases. Given their market power, airlines themselves may be able to ameliorate much of the welfare effects (the deadweight loss) through price discrimination.

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47 Market Economics Limited *Economic and Social Contribution of New Zealand's Airports*, 17 December 2013.

48 Market Economics Limited *Economic and Social Contribution of New Zealand's Airports*, 17 December 2013.

49 ATAG *Aviation Benefits Beyond Borders*, April 2014 (available at http://aviationbenefits.org/media/26786/ATAG__AviationBenefits2014_FULL_LowRes.pdf)

50 Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 71.

The Productivity Commission went on to note that, in practice, airport charges make up such a small proportion of total airfares that even large increases in these charges were unlikely to have significant welfare effects, and would largely represent a "distribution" between airports and airlines.[51] In the context of considering whether increased regulation was justified in order to reduce airport charges, the Commission conducted an analysis of airport charges and the lowest available airfares over a five year period. It noted that:

(i) Analysis put forward by the airlines was flawed, in that it suggested a $1 increase in aeronautical charges would translate into $1 of airport profit. In the Productivity Commission's view, this ignored the possibility that a $1 increase in aeronautical charges could support, for example, $100 million in capital expenditure, which would have commensurate flow-on benefits for other industries.[52]

(ii) The Productivity Commission's own analysis suggested that even if increases in airport charges were passed on fully to customers, such increases were unlikely to significantly impact on the ticket prices paid by consumers, limiting any reduction in patronage (and associated welfare losses).[53]

(iii) Airport charges are a small part of airfares overall (and the total cost of travel), and any "inefficient" component of an airport charge is an even smaller proportion again.[54]

How are trade-offs made between the various costs and benefits?

66. The final step in any analysis of asymmetric costs will be considering how trade-offs should be made between the various costs and benefits described above. In the Part 4 context, it will be important to consider where the balance should be struck between the interests of current and future consumers, and between the interests of intermediate consumers and ultimate consumers of airport services. Fully evaluating and considering how these trade-offs are to be made is likely to be a complex task. However, at this stage, and in our view, the Part 4 purpose statement indicates that where there are competing considerations the focus should be on the interests of future consumers to satisfy the "long-term" focus, and on the interests of passengers as ultimate consumers of the relevant services.

67. The Australian Productivity Commission has considered factors relevant to such tradeoffs. For example:

(a) Efficient pricing for airport services and facilities has several dimensions. Addressing one dimension may distort other dimensions (for example, incentives to invest or to provide appropriate quality levels). The Productivity Commission also noted that there were practical difficulties in determining precisely what the efficient prices are for airport services.[55]

(b) If regulation focused on limiting prices overshoots, it may significantly curtail investment and have negative long-term dynamic efficiency consequences. Further, the Productivity Commission noted that regulation faces an asymmetric risk, in that excessively stringent regulation (that restrained airport charges below efficient levels) would endanger investment and the welfare gains associated with it, but insufficiently

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[51] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 70-71.
[52] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 90.
[53] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 92.
[54] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 95.
[55] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 95.

stringent regulation (that may allow airport charges to rise above efficient levels) would not significantly imperil welfare.[56]

(c) The asymmetric risks involved suggested that it would be prudent, where uncertainty existed, to err on the side of less stringent regulation.[57]

68. In the context of the present consultation on WACC, the Productivity Commission's analysis provides support for retaining the Commission's current approach in the IMs. The Productivity Commission's analysis highlights that:

(a) Even assuming the use of the 75th percentile somehow results in airport charges that are too high, that amount would be unlikely to lead to a significant welfare loss, given that airport charges are a small proportion of the overall cost of travel, and any difference introduced by the use of the 75th percentile (compared to some lower percentile) will be an even smaller proportion again.

(b) However, making changes to the 75th percentile in isolation may, to the extent that this impacts on pricing, distort other dimensions of the efficient provision of airport services, including incentives to invest and to provide services at appropriate quality levels. In this context, it is important to note that it is not clear that reductions in airport charges as a result would be fully passed on to consumers.

(c) The Commission should be particularly cautious in changing its current approach in light of these tradeoffs, especially given that:

(i) there are considerable practical difficulties in determining what efficient prices are (which is of particular relevance as the Commission will need to demonstrate its current approach to the 75th percentile is leading to inefficient prices and/or excess profits in order to justify a change to that approach); and

(ii) aeronautical charges can support a considerable amount of capital expenditure, which can have commensurate flow-on benefits for associated industries.

SECTION 6: THE WAY FORWARD?

69. In light of this framework, and the difficulties the Commission is likely to face in robustly quantifying the different elements of a full and transparent cost/benefit analysis, how then can the Commission go about evaluating the issues it has raised? In short, we think it is open to the Commission to confirm its existing approach to the 75th percentile, without the need to expressly justify a precise optimal percentile.

70. NZ Airports acknowledges that it is open to the Commission to exercise its discretion and judgement in selecting the appropriate percentile estimate for different regulatory purposes, guided by the requirement to determine an approach that will best meet the purpose statements under Part 4 regulation. The Commission followed this approach when it first determined the IMs, and outlined a range of factors that influenced its choice of percentile estimate in its reasons papers for the various regulated sectors. As we have set out above, this included a wide range of factors for the airport sector, and the Commission's final decision to specify a range was not expressly linked to the concept of asymmetric social consequences.[58]

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[56] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at pages 95-96.
[57] Australian Productivity Commission *Economic Regulation of Airport Services*, Report 57, 14 December 2011 at page 96.
[58] See IM Reasons Paper at E11.51-E1.60.

71. As we have discussed, since the IMs were determined the Commission has subsequently stated that the 75th percentile estimate of WACC is used for a range of additional purposes, including recognising differences in risk between suppliers within a sector, and providing a "buffer" for asymmetric risks (which are not otherwise accounted for in the Commission's regulatory framework).[59]

72. These factors continue to support the current approach of setting a WACC range for information disclosure purposes, and suggest that the upper bound of that range could reasonably extend beyond the 75th percentile. These factors also continue to suggest that an approach that uses at least the 75th percentile as a reference point for assessing airport profitability in the information disclosure context (and for price-setting purposes in the context of regulated businesses) is reasonable and robust.

73. At the very least, the Commission's previous statements about the factors that inform its choice of percentile estimate, and its subsequent statements about the "role" of the 75th percentile suggests that any analysis of the "optimal" point-estimate cannot concentrate solely on whether a specific percentile can be precisely justified and quantified by the concept of asymmetric social consequences. As noted by NERA, the use of the 75th percentile must be considered within the context of the WACC methodology and also the wider regulatory framework.[60] As stated by NERA:

    (a) The use of the 75th percentile helps offset a range of features of the regulatory framework that might otherwise see firms consistently under-recover their costs. This type of outcome would be unsustainable in the long term and would risk significantly distorting investment incentives.[61]

    (b) If the use of the 75th percentile is altered on the basis of empirical analysis that is narrowly focused on the asymmetric losses associated with setting the WACC higher or lower than the cost of capital, the Commission would need to revisit the wider WACC methodology.[62]

74. In any event, even if the current issue is ultimately decided solely on the question of asymmetric social consequences (which we would not consider to be an appropriate or robust approach when considering an amendment to the IM), the Commission can be satisfied that its current approach to the percentile issue does not require amendment at this stage. We note that:

    (a) There is a robust theoretical and conceptual basis for going above the 50th percentile estimate of WACC to allow for asymmetric social costs, including as set out by NERA in the attached report (particularly sections 3 and 4). As discussed by NERA:

        (i) The relevant factors suggest that the net social costs associated with misspecifying the WACC estimate are likely to be asymmetric. Under those conditions, NERA state that a prudent regulator would aim to assess profitability by reference to a WACC that is relatively more likely to be above than below the true cost of capital.[63]

        (ii) There are strong economic reasons for believing this asymmetry holds,[64] and its nature appears to be generally accepted by regulators and experts as

59 As discussed in more detail in UniServices *Comment on "Further work on the Cost of Capital Input Methodologies Commerce Commission invitation to provide evidence on the WACC percentile"*, 1 May 2014 at section 3.3.
60 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 39.
61 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 39.
62 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 40.
63 See eg NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page pp ii-iii.
64 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 39.

well as supported by the empirical analysis that has been undertaken to date.[65] In particular, NERA has not found any analysis suggesting the social loss from setting the WACC too high would be more significant than that associated with setting the WACC too low.[66]

(b) Precisely quantifying the "optimal" percentile is likely to be an extremely difficult, potentially impossible task. In our view, the analytical framework discussed above illustrates that:

(i) The Court may not have fully comprehended the nature and difficulties of the suggested further analysis it recommended the Commission carry out. The Court recommended that the Commission consider its scepticism in light of further analysis and experience. It noted that further consideration may confirm the Commission's original findings, or that it may not. These are not, however, the only options. It is equally plausible that further evidence may not provide a clear answer, or may establish a range of possible outcomes for the choice of percentile estimate.

(ii) Even if it were possible to precisely quantify the various elements of a cost/benefit approach (whether to feed into a loss factor analysis, or as a standalone task), this will not translate into a precise percentile estimate, and will inevitably rely on a number of assumptions. For example, it appears that a robust loss factor approach is likely to rely heavily on the statistical properties apparently associated with the WACC distribution, including the standard error of that distribution. As previously recognised by both the Commission and the Court, it is by no means clear that those parts of the WACC IM that claim statistical terminology actually have the statistical properties usually associated with those terms.[67]

(c) In relation to the airport sector, the available evidence (as discussed above) supports a conclusion that New Zealand's regulated airports are currently delivering key benefits for consumers and for the wider local, regional and national economies. To be satisfied that change is required, the Commission will need to point to clear evidence of how the potential costs of maintaining its current approach outweigh these benefits.

(d) In particular, in its recent section 56G review, the Commission considered that it was too early to tell whether the Part 4 regulatory framework was effectively promoting efficient investment at the three regulated airports. However, in its early days, the Commission's review indicates that all three airports are planning to invest efficiently over the forthcoming pricing period ("**PSE2**"). For example, the Commission has recently noted that:

(i) It appears that Wellington Airport has sought to invest efficiently for the next pricing period, and that forecast capital expenditure for this pricing period is prudent. The Commission noted that few concerns were raised by airlines in relation to forecast levels of capital expenditure.[68]

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65 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 39.
66 NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 14.
67 See eg IM Reasons Paper at paragraph E11.21 and IM Judgment at paragraph 1450-1451.
68 Commerce Commission *Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Wellington Airport: Section 56G of the Commerce Act* 1986, 8 February 2013 at paragraphs H3 and H4.1.

(ii) Information disclosure regulation appears to have promoted an efficient investment plan for PSE2 at Auckland Airport. Airlines generally agree that the level and timing of investment planned for PSE2 is efficient based on the circumstances at the time.[69]

(iii) Christchurch Airport's investment plans for PSE2 are largely considered appropriate. Based on submissions received from airlines, Christchurch Airport's investment plans for PSE2 appear to be generally prudent and occurring at an appropriate time.[70]

(e) All three airports used a cost of capital estimate higher than the Commission's 75th percentile estimate of WACC for information disclosure purposes when setting prices.[71] Although airlines raised concerns that airport charges were too high, this is natural given the business drivers and incentives of airlines in keeping airport charges as low as possible. However, it is notable that airlines generally considered that the level and efficiency of forecast investment was appropriate for all three regulated airports.

(f) In NZ Airports' view, it would be premature for the Commission to depart from its current approach in the absence of any evidence that trends in actual performance over time suggest that its WACC IM is "too high". This is particularly the case given that there has also been very limited analysis to date of the complex relationship and interaction between pricing, quality and investment in the airport context.

CONCLUSION

75. For the reasons discussed above, NZ Airports considers that providing for a WACC range for information disclosure regulation of the airport sector continues to be the best approach. For the airport sector, the current WACC IM provides for the Commission to determine a WACC range for each disclosure year, being the values that fall between the 25th percentile and 75th percentile of the mid-point estimate of WACC.

76. The Commission intended the use of this WACC range to recognise that estimating WACC is prone to error, and that there will be natural fluctuations and uncertainties in attempting to precisely measure and monitor airport returns.[72] This approach also correctly recognises that there is no single "correct" view of the appropriate level of returns for an airport business. The Court's decision does not undermine or call into question the Commission's reasoning in this respect. In fact, the judgment expressly endorses the Commission's current approach for the airport sector in light of the purpose of information disclosure regulation and Part 4 more generally.

77. The Commission's current approach to setting a WACC range for information disclosure regulation for airports is entirely consistent with the Part 4 purpose statement, and the purpose of information disclosure regulation. This does not mean that an alternative approach may not be materially better (such as expanding the upper bound of the Commission's current range). However, where the current approach has been upheld by the Court, it would be inappropriate

69 Commerce Commission *Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport: Section 56G of the Commerce Act* 1986, 31 July 2013 at paragraphs H3 and H4.1.

70 Commerce Commission *Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Christchurch Airport: Section 56G of the Commerce Act 1986*, 13 February 2014 at paragraph H3 and H4.1.

71 As discussed earlier, the final outcome of all airport pricing decisions reflects commercial judgments and concessions, which means that the ultimate price cannot be tied back to the strict application of a building blocks model. In many cases, this means that the overall expected returns are lower than the cost of capital estimate used by the airports to inform their price-setting approach.

72 IM Reasons Paper at paragraph E11.54-11.60.

for the Commission to consider the merits of alternative approaches to the WACC IM ahead of the scheduled seven-year review.

78. It may not be possible to quantify the exact percentile estimate that is appropriate for price-setting purposes. The Court recommended that the Commission consider its scepticism in light of further analysis and experience. It noted that further consideration may confirm the Commission's original findings, or that it may not. These are not, however, the only options. It is equally plausible that further evidence may be inconclusive, or establish a range of possible outcomes for the choice of percentile estimate. However, these potential outcomes should not be of concern. Nor do they (alone or in conjunction with the Court's comments) suggest that the 50th percentile must be adopted as the "default" position, in the absence of evidence that this approach will better promote the Part 4 purpose statements.

79. There is currently considerable support for retaining the use of (at least) the 75th percentile WACC estimate in setting prices, and as a reference point for assessing airport profitability. As advised by NERA, there are strong qualitative reasons for setting the WACC above an unbiased midpoint estimate of the cost of capital. Further, it is highly likely the Commission's WACC methodology is downwardly biased. As stated by NERA, taken together, even in the absence of robust empirical analysis of the "optimal" percentile, these conclusions lend support to the current choice of the 75th percentile (which NERA also note is consistent with international practice).[73]

80. Any change from this approach must be justified and supported in terms of the Part 4 purpose statements, in light of a robust analytical approach, and in the context of the available evidence.

81. Finally, NZ Airports reiterates its concerns about the process adopted by the Commission to considering the Court's comments. We are concerned that the Commission's decision to bring forward consideration of the WACC percentile issue in isolation is the true cause of any current uncertainty surrounding the WACC IM, rather than the Court's comments themselves. To address these concerns, we encourage the Commission to re-evaluate its decision to consider amendments to this part of the IM in isolation and outside of the seven year IM period. If the Commission intends to proceed with its consideration despite these concerns, we strongly encourage the Commission to develop and consult on a robust analytical framework for assessing the relevant issues, which will then allow interested parties to provide and gather the necessary evidence to feed into that analysis.

[73] NERA *Review of the WACC Percentile: A report for the New Zealand Airports Association,* 5 May 2014 at page 39.