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MEMO

TO: Adrienne Darling
DATE: June 14, 2013
FROM: James Mellsop and Will Taylor
SUBJECT: Section 56G - review of NZIER report

1. Introduction

You have asked us to review the NZIER report for Air New Zealand titled "Assessing the effectiveness of information disclosure", dated May 2013.

2. Section 2 of the NZIER report - "Profitability: a generous assessment"

2.1. Probability analysis and the "true" WACC

The NZIER report's core point is that by assessing the forecast IRR against the 75th percentile of the WACC range, there is a high probability that Auckland Airport will earn more than its true WACC. In fact, the NZIER report argues that on an expected basis, Auckland Airport will earn more than its true WACC.

It is important to note that the NZIER report's analysis assumes "that WACC … is normally distributed" (page 4), and that the (footnote 3):

> *…true value of WACC comes from the distribution specified in the Commission's IMs.*

The NZIER report also asserts that (page 4):

> *The mid-point of the range must be the Commission's assessment of the most likely 'true' rate of return (WACC) that would promote the objectives of the Act*

However, these assumptions and assertions are debatable.

During development of the IMs and the Revised Draft Guidelines on the Cost of Capital,[1] the Commission considered various approaches to estimating the WACC range (of which there was no

[1] Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital, 19 June 2009.

consensus by submitters on the best approach[2]), and settled on the "complex analytical" approach. When discussing the drawbacks of this approach the Commission noted:[3]

> *The main disadvantages of this approach are that, although greater use is made of statistical information,* ***the use of such information might create a sense of precision that is not warranted.*** *Also, some degree of judgement is still involved when applying this approach.* ***Finally, the assumption of the overall cost of capital estimate being normally distributed is unlikely to be satisfied in reality****. [emphasis added]*

The issue of unwarranted precision identified by the Commission undermines the NZIER report's analysis. It is unlikely that the Commission's methodology provides a reliable enough estimate of the WACC distribution for a probability weighted analysis (even assuming it includes all impacts) to be robust. Related to this is that the Commission has made no allowance for model error in its WACC range, which it acknowledges may require judgement to be exercised:[4]

> *Sometimes, even when statistically-estimated standard errors are available, in order to account for any uncertainties (e.g. model uncertainty) that cannot readily be quantified, it may be desirable to augment or attenuate these estimates using qualitative judgment*

Furthermore, the Commission is using an industry WACC to assess each of the airports and therefore it is only a proxy for Auckland Airport's true WACC. Given a decision by the Commission to use an industry WACC, caution must be exercised before concluding that excess profits are being earned when the specific firm being examined may, for example, have different systematic risk than that assumed in the industry benchmark.

2.2. Trade-offs when using a point above the median

As noted above, the core point made by the NZIER report is that by choosing a point above the median of the distribution, on an *ex ante* basis there will an expectation of excess profits.

The Commission has been conscious of the risks associated with this, and indeed explicitly acknowledged this point in the Input Methodologies (Airport Services) Reasons Paper (December 2010, E1.14):

> *...due to the uncertainty and standard errors associated with the key parameters used in the estimation of the cost of capital, the Commission will identify a cost of capital range. If the Commission chooses a point estimate above the mid-point of the range, the overall return may reflect an allowance somewhat in excess of an expectation of a normal rate of return on an ex ante basis.*

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2 E11.36 of the Input Methodologies (Airport Services) Reasons Paper, December 2010.

3 E11.22 of the Input Methodologies (Airport Services) Reasons Paper, December 2010.

4 Footnote 761 of the Input Methodologies (Airport Services) Reasons Paper, December 2010.

The Commission is not stating that choosing a point above the mid-point *will* result in a WACC estimate that leads to above normal returns, because the true WACC remains unknown (as discussed above). The Commission is merely recognising that there is a risk its WACC estimate may be above the true WACC.

The Commission has chosen to accept this possible outcome because it thinks the social costs of such an outcome are lower than the social costs of an outcome in which Auckland Airport earns below its true WACC, resulting in under-investment. As noted in the Auckland Airport Draft 56G report (F60):[5]

> *We have considered the 75th percentile cost of capital, in addition to the midpoint, when assessing Auckland Airport's profitability. The 75th percentile cost of capital allows for the uncertainty of estimating the true cost of capital and limits the potential asymmetric consequences of estimation error on pricing and investment. Typically, we use the 75th percentile in the context of administering price control.*

In the context of choosing a WACC point estimate for administering price control for EDB/GPBs,[6] the Commission described its choice of the 75th percentile as giving more weight to dynamic efficiency considerations:[7]

> *Incentives for dynamic efficiency can have significant benefits for consumers over the long term, so it is important to preserve incentives to invest and innovate. Accordingly, this consideration has been given greater weight than limiting suppliers' ability to extract excessive profits. Weighing the arguments, and having regard to the Part 4 Purpose, and in particular, that there are incentives for EDBs, GPBs, and Transpower to invest and innovate, the Commission adopts the 75th percentile estimate of the cost of capital as the cost of capital for price-quality regulation.*

The NZIER report argues that different points on the WACC distribution "are not created equal as they are associated with quite different impacts" (page 5). This is quite right. However, the NZIER report is focussed purely on the profitability impact, and neglects another impact, being the impact on investment if the true WACC differs from the IRR. This could be accounted for by the inclusion of an explicit "social loss function". This approach has been proposed to the Commission before (see Van Zijl (2007)[8]), but was not adopted because of concerns about the true form of the

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5 April 2013.

6 Because the Commission does not directly set prices for airports, it did not explicitly consider the issue of the appropriate WACC for price setting in the the Input Methodologies (Airport Services) Reasons Paper, December 2010.

7 Paragraph 6.7.12 of the Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, December 2010...

8 Tony van Zijl, *Response on behalf of Vector Limited to the Commerce Commission's Estimate of WACC in the Draft Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Limited and Vector Limited*, 26 November 2007.

loss function and how to calibrate it.[9] We can interpret the use of the 75th percentile as a rule of thumb to balance the risk that the proxy WACC is not the true WACC and the trade-offs in favour of dynamic efficiency.

This is related to the broader point that the NZIER report is narrowly focussed on profitability, whereas the Commission is quite correctly focussed on promoting the long-term benefit of consumers. The NZIER report's narrow focus on profitability perhaps reflects a misinterpretation of the Commission's section 56G findings in respect of Auckland Airport. At page 1, the NZIER report states:

> *The Draft Report's findings about expectations for excess profits are the most important element in the overall Draft conclusion that the ID regime is working effectively.*

However, our reading is that the Commission's conclusion is more nuanced than this. In fact, the very first sentence of the Draft Report states:

> *Our draft conclusions on the effectiveness of information disclosure vary between the different outcomes sought under Part 4.*

2.3. Sensitivity analysis/behaviour beyond PSE2

The other key argument that section 2 of the NZIER report makes is that the Commission should assign a probability to Auckland Airport revaluing assets at the end of PSE2 and not treating the revaluations as income. Crucially, however, Auckland Airport has made a public statement about its end-of-PSE2 intentions:[10]

> *Auckland Airport has stated it has no intention of revaluing its assets base for pricing in PSE3 and that continuing the moratorium is a distinctly possible outcome, if customers support that approach. It also states that* ***if a revalued asset base were to be used in pricing, the cumulative revaluation impact will be treated as an offset to the future revenue target.*** *This is consistent with the IMs and ensures that any revaluation gains to the airport are offset through and [sic] reduction in prices charged to consumers. We consider Auckland Airport's assurances provide the best indication of future performance at this time. [emphasis added]*

By making this statement, and the Commission relying on it, the probability of Auckland Airport, if it did unwind the moratorium, treating revaluations as income has become even higher. Otherwise Auckland Airport would run a very high risk of further regulatory intervention.

Indeed the Commission has explicitly noted that because its conclusions depend on how the moratorium is treated, the Commission will be monitoring Auckland Airport's behaviour at the

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[9] Paragraphs 241-241, Commerce Commission, *Revised Draft Guidelines: The Commerce Commission's Approach to Estimating the Cost of Capital*, 19 June 2009.

[10] F33, Draft Section 56G report for Auckland Airport.

next price setting event:[11]

> *Our draft conclusion is based on accepting the guidance Auckland Airport has provided during this review about its likely pricing behaviour after PSE2. Given this guidance cannot be seen as a binding commitment, we intend closely monitoring whether Auckland Airport acts consistently with the guidance it has given during this review at the next price setting event.*

As we have previously noted in respect of the Wellington Airport Draft 56G report,[12] while it is necessary for IRR analysis to make an assumption about *future* behaviour, it is inappropriate for that assumption to bias the assessment of *current* behaviour. The current behaviour to be assessed is that Auckland Airport has stated it will treat the future revaluation impact (if any) in an NPV neutral manner. Auckland Airport's behaviour in setting prices for PSE3 will be judged when that price setting event occurs.

As a final point, the NZIER report focuses on sensitivities that would increase the profitability of Auckland Airport. However, other possible outcomes would decrease Auckland Airport's profitability, e.g., volumes being lower than forecast. Any sensitivity analysis should be balanced.

3. Section 3 of the NZIER report – "Conclusions rely too much on assurances and incomplete information"

The NZIER report is critical of the Commission's profitability analysis, on the basis that the Commission has not assessed investment and opex efficiency. After making this argument, the NZIER report provides evidence that appears to show Auckland Airport earning healthy EBITDA margins. However, it is unclear to us how this data supports the NZIER report's argument, as presumably strong EBITDA results are consistent with efficient opex management.

Furthermore, Auckland Airport has already filed independent benchmarking results that are consistent with the airport being efficient. Benchmarking by Leigh Fisher indicates that Auckland Airport's has the 6th lowest operating costs per passenger out of sample of 50 airports.[13] We note that the NZIER report does not refer to or reconcile this data.

It is also not clear how the "selection of high performing airports" listed in Table 1 of the NZIER report was chosen. It is noticeable, for example, that a variety of other "local" airports are not included, e.g., Melbourne and Brisbane.

Section 3 of the NZIER report then sets out some revenue per passenger data. The NZIER report is not explicit about its point here, but presumably the suggestion is that a high revenue per passenger

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[11] E47, Draft Section 56G report for Auckland Airport.

[12] NERA, *Asset values in the Commission's IRR analysis of Wellington Airport*, 30 November 2012.

[13] See page 30 of Auckland Airport's price setting disclosure for PSE2, dated 2 August 2012.

implies high profitability per passenger. But this is of course not correct, as profits are also a function of costs, which will vary between airports depending on factors such as domestic/international passenger mix, economies of scale, land values, etc.

The final part of section 3 of the NZIER report compares Auckland Airport's asset base per passenger with Sydney Airport's. We agree with the NZIER report comment that the Figure 8 data "tells us little which is definitive" (page 13). Even assuming that the comparison is an "apples with apples" one (e.g., does it include the Northern runway, and how does it account for the fact that Sydney Airport does not have freehold ownership of land), there could be legitimate (efficient) explanations for the differences, e.g., there are economies of scale in providing airport services, or varying asset utilisation due to differing demand levels at peak and off-peak times.[14]

Following Figure 8 is the following paragraph:

> *The key point is that investment plans and the efficiency of the asset base are key determinants of 'reasonable returns'. This includes assets that are not immediately necessary for operations (e.g. land) but are included in the price setting assets and are paid for by captive customers.*

It is not clear what this is a reference to, but we note for the sake of clarification that Auckland Airport has excluded land held for future use from its pricing asset base.

Overall it is unclear what the NZIER report is attempting to do with the various data it sets out, and the references to "subjective factors".

Finally in section 3, the NZIER reports critiques return on investment (ROI) as a measure of profitability. However, because of concerns over its appropriateness, the Commission did not use ROI, but instead used IRR (see pages 88-90 of the Draft Report).

4. Section 4 of the NZIER report – "Is generosity appropriate under information disclosure?"

The NZIER report argues that judgment is required when analysing the effectiveness of ID, and that the Commission has erred on the side of a positive (i.e., favourable to Auckland Airport) finding. The NZIER report argues that "[the] incentives only work if there is decisiveness on the part of the regulator" (page 15).

The NZIER report does not refer to or reconcile the fact that the Commission has found that ID is not effective at limiting excessive profits in the case of Wellington Airport.

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[14] Put another way, two airports with similar peak demand and therefore total assets would show different assets per passenger due to differences in off-peak services.

We do not read the Commission's Draft Report in respect of Auckland Airport the same way that the NZIER report does, i.e., that there is some sort of positive bias. For example, we note that:

- The Commission rejected the submission of Auckland Airport that its 2012 ID asset valuation be used as the opening IRR asset base; and
- The Commission persisted with using its industry-wide estimate of WACC, despite evidence suggesting that Auckland Airport faces higher systematic risk than that incorporated in the Commission's industry-wide estimate.

If the NZIER report is asserting that the Commission should err on the side of a negative finding, we would disagree. We think it is appropriate for any decision-making or policy body to be confident of its views before taking a course that could result in more intrusive regulation of a private entity.

The Commission should be able to reward appropriate behaviour with a positive outcome. Erring on a negative side would detrimentally affect incentives and undermine the future effectiveness of the disclosure regime.

Finally, Figure 9 of the NZIER report and the corresponding discussion appears to imply that an ID regime will take a long time to affect performance. This might be true to a degree, but there is evidence that Auckland Airport's behaviour in respect of PSE2 has changed. As the Commission notes at paragraph X2 of the Draft Report:

> *Our overall impression is that although the regime has only been in place a short time, Auckland Airport has made a number of positive changes to a number of aspects of its approach from PSE1 to PSE2.*

Specifically in relation to profits, the Commission noted that (at paragraph X3):

> *...for PSE2 Auckland Airport targeted returns within an appropriate range, based on a reasonable assessment of how, at that time, it could have considered the Commission might assess its performance.*

Another obvious indicator of a change in Auckland Airport's behaviour is the exclusion of land held for future use (e.g., the Northern Runway) from the pricing asset base for PSE2, as compared to its partial inclusion in PSE1.