Comment on submissions on the Commerce Commission's draft asset beta methodology

Report for Wellington International Airport Ltd

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Executive summary

The New Zealand Commerce Commission ('Commission') published its draft decisions on 14 June 2023, which includes a cost of capital topic paper that sets out the Commission's input methodologies (IM) draft decisions on individual weighted average cost of capital (WACC) parameters.

On 19 July 2023, the Commission published the submissions that it received on its draft decisions. Wellington International Airport Ltd (WIAL) has asked us for our opinion on the economic rationale and merits of the arguments raised by submissions on the Commission's draft asset beta methodology. These include the submissions by:

- Qantas;
- TDB Advisory for the Board of Airline Representatives New Zealand Inc (BARNZ); and
- Castalia for Air New Zealand.

In this report, we assess the economic rationale and merits of the arguments raised by these submissions.

Estimating benchmark equity beta for airports

The equity beta component of the WACC compensates equity investors for the systematic risks of investing in businesses providing regulated services. The Commission's established method for estimating the benchmark airport equity beta involves a six-step process that uses historic asset beta estimates as indicative forward-looking asset betas, on the basis that asset betas cannot be forecast reliably.

We consider that this principle continues to hold for the 2023 IM, such that it remains appropriate for the Commission to continue setting the benchmark airport asset beta based on the observed historical data instead of conducting speculative analysis about the frequency, length, and impact of any future COVID-like events. We note that TDB Advisory and Castalia have used subjective arguments in support of the Commission's draft decision method that derives a premium for future COVID-like events, but these arguments ultimately are not supported by expert reports in the fields of epidemiology or political science.

In addition, we continue to consider that omitting the country filter when identifying the sample of comparator airports is consistent with the Commission's six-step process for deriving asset beta estimates. While Castalia supports the Commission's draft decision to adopt a narrower comparator sample, neither Castalia nor the Commission have carried out detailed analysis of individual comparators.

Consequently, it is unclear that the Commission's smaller sample will necessarily generate airport asset beta estimates that are more unbiased compared to the asset beta estimates generated from the larger sample updated using the methodology in the 2016 IM. Furthermore, the smaller sample will be more sensitive to country-specific effects, and will require subjective decisions for assessing individual comparators while reducing regulatory predictability and increasing the impact of anomalous beta estimates.

While TDB Advisory argues that aeronautical service activities have a risk profile that is closer to that of utility and infrastructure providers compared to retail and recreation service providers, we instead consider that the asset betas observed for water and energy utilities have limited comparative value in the context of the Commission's six-step process. This can be observed from the asset betas for the airport and energy comparator samples, in which airport comparators exhibit asset betas that are materially higher and more diverse than that of energy comparators.

Finally, we also consider that RAB multiples are likely to be uninformative about the appropriateness of the Commission's cost of capital estimates. In particular, the Commission has identified several limitations to its RAB multiples analysis, which in our view apply even more strongly to airports. Consistent with this, we also

observe that the Commission has referred to two RAB multiple estimates for Auckland Airport that differ materially, which highlights the difficulty of estimating RAB multiples accurately for airports.

Removal of the -0.05 asset beta adjustment

The 2016 IM applied a 0.05 downward adjustment to the average asset beta observed from the airport comparator sample. The draft decision finds that a downward adjustment to the asset beta is not justified, and thus omits the adjustment.

The submissions to the Commission's draft decision indicates some consensus that the asset beta downward adjustment is not justified for airports, although the consensus is not unanimous. In particular, Qantas' submission includes scatterplots that show a negative correlation between airport asset betas and the percentage of contributions of aeronautical revenues.

The information in Qantas' submission is insufficient for us to assess the regression results. However, we observe at a high level that Qantas' regression slope for 2012-2017 appears to be statistically insignificant even at 10 per cent significance, and that Qantas' estimates of aeronautical revenue percentages are unreliable.

Consequently, we continue to agree with the Commission's draft decision to omit the adjustment.

Retaining Auckland Airport as a comparator

Qantas considers that Auckland Airport should be omitted from the comparator sample. Although Qantas reasons that Auckland Airport's equity beta estimate is distorted by its 6 per cent representation on the market index, we consider that:

- Qantas' submission only shows that Auckland Airport has an equity beta that is higher than the average, without demonstrating that any such distortion exists; and

- given that Auckland Airport's equity beta is higher than one and its asset beta is above the average observed for the comparator sample, then removing any potential bias would require an uplift to be added to the sample average asset beta.

Instead, we consider that it is important to retain Auckland Airport as a comparator, since it is the only is the only regulated New Zealand international airport that is publicly listed. This is consistent with the reasoning set out in other parts of the Commission's draft decision.

1. Introduction

The New Zealand Commerce Commission ('Commission') published its draft decisions on 14 June 2023, which includes a cost of capital topic paper that sets out the Commission's input methodologies (IM) draft decisions on individual weighted average cost of capital (WACC) parameters.[1]

We have provided our comments on the Commission's draft decision in a previous report for Wellington International Airport Ltd (WIAL), in which we assess the economic rationale and merits of the Commission's draft asset beta methodology.[2]

On 19 July 2023, the Commission published the submissions that it received on its draft decisions. WIAL has asked us for our opinion on the economic rationale and merits of the arguments raised by submissions on the Commission's draft asset beta methodology. These include the submissions by:[3]

- Qantas;
- TDB Advisory for the Board of Airline Representatives New Zealand Inc (BARNZ); and
- Castalia for Air New Zealand.

In the remainder of this report, we assess the economic rationale and merits of the arguments raised by these submissions. We have structured the remainder of this report as follows:

- section 2 discusses arguments raised regarding the Commission's methodology for estimating the benchmark equity beta for airports;
- section 3 discusses the Commission's draft decision to remove the 0.05 downward adjustment to airport asset betas; and
- section 4 discusses the arguments related to retaining Auckland Airport as a comparator.

In preparing this report, we have read and agreed to comply with the *Code of Conduct for Expert Witnesses* in the High Court Rules. We confirm that the matters set out in this report are within our area of expertise.

Our experience and qualifications are set out in our previous report.

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[1] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023.

[2] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023.

[3] Qantas, *RE: Part 4 Input Methodologies Review 2023 - Draft decision*, Letter, 19 July 2023. Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023. TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023.

2. Estimating benchmark equity beta for airports

The equity beta component of the WACC compensates equity investors for the systematic risks of investing in businesses providing regulated services. The Commission's established method for estimating the benchmark airport equity beta involves a six-step process that uses historic asset beta estimates as indicative forward-looking asset betas, on the basis that asset betas cannot be forecast reliably.

We consider that this principle continues to hold for the 2023 IM, such that it remains appropriate for the Commission to continue setting the benchmark airport asset beta based on the observed historical data instead of conducting speculative analysis about the frequency, length, and impact of any future COVID-like events. We note that TDB Advisory and Castalia have used subjective arguments in support of the Commission's draft decision method that derives a premium for future COVID-like events, but these arguments ultimately are not supported by expert reports in the fields of epidemiology or political science.

In addition, we continue to consider that omitting the country filter when identifying the sample of comparator airports is consistent with the Commission's six-step process for deriving asset beta estimates. While Castalia supports the Commission's draft decision to adopt a narrower comparator sample, neither Castalia nor the Commission have carried out detailed analysis of individual comparators.

Consequently, it is unclear that the Commission's smaller sample will necessarily generate airport asset beta estimates that are more unbiased compared to the asset beta estimates generated from the larger sample updated using the methodology in the 2016 IM. Furthermore, the smaller sample will be more sensitive to country-specific effects, and will require subjective decisions for assessing individual comparators while reducing regulatory predictability and increasing the impact of anomalous beta estimates.

While TDB Advisory argues that aeronautical service activities have a risk profile that is closer to that of utility and infrastructure providers compared to retail and recreation service providers, we instead consider that the asset betas observed for water and energy utilities have limited comparative value in the context of the Commission's six-step process. This can be observed from the asset betas for the airport and energy comparator samples, in which airport comparators exhibit asset betas that are materially higher and more diverse than that of energy comparators.

Finally, we also consider that RAB multiples are likely to be uninformative about the appropriateness of the Commission's cost of capital estimates. In particular, the Commission has identified several limitations to its RAB multiples analysis, which in our view apply even more strongly to airports. Consistent with this, we also observe that the Commission has referred to two RAB multiple estimates for Auckland Airport that differ materially, which highlights the difficulty of estimating RAB multiples accurately for airports.

2.1 Overarching purpose of setting the benchmark airport equity beta

In its 2016 IM, the Commission explained that the beta is a measure of a company's exposure to systematic risk, ie, the extent to which the company's returns fluctuate relative to the equity returns in the stock market as a whole.[4] Thus, the purpose of estimating the benchmark airport beta is to compensate airports for undertaking the systematic risks associated with their regulated services.

The Commission also set out its view in the 2016 IM that betas could not be forecast reliably, such that historic beta estimates should be used when setting forward-looking betas. The Commission thus applied a six-step process that set out a systematic approach for establishing the benchmark asset beta using historic estimates.

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[4] New Zealand Commerce Commission, *Input methodologies review decisions*, Topic paper 4: Cost of capital issues, 20 December 2016, para 48.

However, the Commission's approach in the draft decision departs from this principle and instead relies on arbitrary assumptions about the probability, length and impact of future COVID-like events. The submissions to the draft decision similarly engage in subjective speculation about the likelihood and severity of future lockdowns without providing supporting expert evidence.

In our view, future asset betas cannot be forecast reliably, and the effect of future COVID-like events with unknown frequency, length and impact are even more difficult forecast. Consequently, it is appropriate for the Commission to continue applying its estimation methodology from the 2016 IM, which relies exclusively on historic data without inserting speculative assumptions about the frequency, length and impact of future COVID-like events.

2.1.1 Six-step process for calculating historic beta estimates

The Commission has previously stated, and we agree, that the asset beta for a company cannot be observed directly, and instead must be estimated. To that end, the Commission developed and applied a six-step process to estimate the equity beta in the 2010 IM and the 2016 IM. The Commission states that it has continued to apply the same process in the 2023 draft decision. These six steps are:[5]

1. identify a sample of relevant comparator firms;

2. estimate the equity beta for each firm in the sample;

3. de-lever each equity beta estimate to get an estimated asset beta for each firm in the sample;

4. calculate an average asset beta for the sample;

5. apply any adjustments for regulatory differences or differences in systematic risk across services to the average asset beta for the sample; and

6. re-lever the average asset beta for the sample to an equity beta estimate using the Commission's assumed notional leverage.

The 2010 and 2016 IMs implemented step four of the process by calculating the sample average asset beta observed over the last two non-overlapping five-year periods, and then taking the average of the two. The Commission further explained in the 2016 IM that its methodology involved using historic beta estimates because:[6]

- there is no reliable way to forecast betas over time; and

- historic estimates of average betas are expected to be relatively stable over time.

> Historic beta is estimated empirically. As the cost of capital is intended to be forward-looking, forward-looking betas are required. **As there is no reliable way to forecast betas, we assume that historic beta estimates are indicative of future betas.** Historic estimates of average betas are used as beta is expected to be relatively stable over time. (emphasis added)

We consider that there remains no reliable way to forecast betas over time. However, market events such as the recent COVID-19 pandemic may cause investors to reassess the level of risk for infrastructure businesses that have been adversely affected by these events.

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[5] New Zealand Commerce Commission, *Cost of capital topic paper | Part 4 Input Methodologies review 2023 - Draft decision*, 14 June 2023, para 4.26. New Zealand Commerce Commission, *Input methodologies review decisions*, Topic paper 4: Cost of capital issues, 20 December 2016, para 266.

[6] New Zealand Commerce Commission, *Input methodologies review decisions*, Topic paper 4: Cost of capital issues, 20 December 2016, para 49.

2.1.2   There is no reliable way to forecast betas over time

In the 2023 draft decision, the Commission has adopted a different approach from the 2016 IM. This approach:[7]

- starts with a long-term pre-COVID-19 average asset beta estimate, which the Commission calculates at 0.53; and

- applies a premium of 0.02 to account for the risk of COVID-type events occurring in the future, resulting in an airport asset beta of 0.55.

In our previous report, we have observed that the approach in the draft decision is a form of ex-ante compensation for the risks of future asymmetric COVID-type events. It implicitly assumes that the Commission:[8]

- can estimate the expected length and frequency of future COVID-type events, as well as the resulting impact on asset betas; and

- will apply the uplift in perpetuity.

We have also observed that the Commission's approach:[9]

- is ultimately based on arbitrary assumptions of the probability, length and impact of future COVID-like events;

- requires airports to bear the risks of COVID-like events occurring at different length, frequency, impact and spacing compared to the Commission's assumptions, even though consumers are best placed to bear the risks of such high-impact-low-probability events; and

- creates additional regulatory uncertainty that makes it more difficult for regulated airports to raise capital for investments in line with the Part 4 purpose, since individual IMs are not binding on future IMs and it is difficult to specify and delineate the circumstances for which the approach will be applied in future.

We therefore have concluded in our previous report that the Commission can address these issues by committing to:[10]

- applying the estimation methodology from the 2016 IM; or

- adopting the average asset betas observed from the last three five-year periods.

There is broad consensus in the submissions that the COVID-19 pandemic has increased systematic risks for airports. However, in contrast to our observations, TDB Advisory and Castalia support the Commission's approach that applies a premium to account for the increased risk of future COVID-type events instead of relying on historic asset betas.

In particular, TDB Advisory hopes and expects that shocks of similar nature to the COVID-19 pandemic are relatively rare events that would be met by policy measures informed by experiences of recent years:[11]

> We fully agree with the approach the Commission proposes to take to estimate the systematic impact of COVID-19 on the asset beta for airports through the next regulatory period. As we and others have argued previously, the COVID-19 pandemic was an extraordinary event, including in its economic, social and public policy impact. **While future shocks of this nature shouldn't be ruled out, we maintain the hope and expectation that these are relatively rare events and**

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[7] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, paras 4.66.3, 4.70.

[8] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p iv.

[9] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p iv.

[10] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, pp iv-v.

[11] TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023, p 5.

ones that would be met by policy measures that are informed by the experiences of recent years. (emphasis added)

TDB Advisory concludes that the average asset beta from the last two five-year periods overstates the likely systematic of impact of the pandemic going forward.[12]

Similarly, Castalia considers that the risk of extensive lockdowns in future pandemics is arguably lower than it was during the COVID-19 pandemic because:[13]

- governments and the air travel sector have learnt lessons on how the sector may need to respond to future pandemics; and

- reviews of the policy responses to COVID-19 are now increasingly concluding that strict extensive lockdowns are bad policy from both health and economic perspectives, which Castalia infers to mean that any future lockdowns are likely to be shorter and more targeted.

In our view, the arguments put forward by TDB Advisory and Castalia are ultimately subjective. The likelihood and severity of future lockdowns is influenced by myriad factors that may include a range of non-economic considerations such as public health, law and politics.

We are not experts in epidemiology or political science. Assessing the likelihood of future COVID-like events and the severity of the ensuring government responses is outside our area of expertise. We are unable to comment on the rarity of future pandemics, or whether future lockdowns are likely to be short and targeted or long and broad.

However, we observe similarly that:

- submissions to the Commission's draft decision have not included reports by experts in these fields; and

- as our earlier report points out, the Commission's approach draws from a report by the UK Civil Aviation Authority's (CAA's) consultant, which acknowledged the inherently illustrative and speculative nature of its analysis:[14]

> We also reiterate that our analysis is based on **speculated** future 'COVID-like' events exhibiting identical properties to COVID-19. Should events of lesser or greater consequence occur, or should the impact on the aviation sector be different in scale, this would also influence our **illustrative** beta impact. (emphasis added)

Consequently, the Commission's reasoning in the 2016 IM that there is no reliable way to forecast betas over time similarly applies when attempting to set a premium for the risks of future COVID-like events. Given the Commission's recognition of the difficulties associated with forecasting betas, it is likely to be even more difficult to analyse how forward-looking asset betas have changed in response to the risks associated with future COVID-like events with unknown frequency, length and impact.

Consistent with the conclusions from our earlier report, we consider it appropriate for the Commission instead to continue setting the benchmark airport asset beta based on the observed historical data. In this way, the Commission does not need to conduct speculative analysis about the frequency, length, and impact of any future COVID-like events, and instead can compensate based on the observed market response for such risks as they materialise.[15]

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[12] TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023, p 5.

[13] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, pp 3-4.

[14] Flint, *Support to the Civil Aviation Authority: Estimating Heathrow's beta post-COVID-19*, August 2021, p 17.

[15] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 33.

The Commission can implement such a data-driven approach by continuing to apply the estimation methodology from the 2016 IM. This method means that any COVID-affected observations will eventually have no impact on the asset beta estimate after 10 years.

Alternatively, the Commission can adopt the average asset betas observed from the last three five-year periods, in which case any COVID-affected observations will have no impact on the asset beta estimate after 15 years.

2.1.3   Historic betas remain the most appropriate estimate of forward-looking asset betas

Castalia identifies that the Commission's task is to assess forward-looking risks:[16]

> Ultimately, the difficult challenge for the Commission is to estimate how much of an impact perceived pandemic risk will have going forward—not how much it has had in the past.

As section 2.1.1 above sets out, the Commission explained similarly in the 2016 IM that forward-looking betas are required because the cost of capital is intended to be forward-looking,[17] although we note that there is some Australian regulatory precedent that supports using backward-looking approaches when calculating the cost of debt.[18]

Nevertheless, we consider that historic betas remain the most appropriate estimate for forward-looking asset betas. This is because:

- as the Commission pointed out in the 2016 IM, there remains no reliable way to forecast betas over time, and as section 2.1.2 above discusses, the arguments put forward in submissions regarding the risk of extensive lockdowns in future pandemics are ultimately speculative; and

- the mechanics of applying historic betas result in superior regulatory outcomes that better fulfil the Part 4 purpose.

Regarding the second dot point above, we observe that Castalia compares the current risk of extensive lockdowns against the risks that were observed during the COVID-19 pandemic:[19]

> Therefore, while the risk of global pandemics has remained the same, the market now understands that risk much better, and the risk of extensive lockdowns in future pandemics is arguably lower than it was during the COVID-19 pandemic.

The implication of Castalia's framework is that if the 2023 IM review had instead occurred in the midst of the COVID-19 pandemic, then the forward-looking risks of lockdowns in future pandemics would have been deemed to be at a materially higher level than Castalia considers them to be currently. Consequently, the benchmark airport asset beta would then be set at approximately 0.93, which is the Commission's COVID-19 beta estimate.[20]

If Castalia's framework were to be applied in full, then at each seven-year IM, the Commission would have to allow:

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[16] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, p 3.

[17] New Zealand Commerce Commission, *Input methodologies review decisions*, Topic paper 4: Cost of capital issues, 20 December 2016, para 49.

[18] The New South Wales Independent Pricing and Regulatory Tribunal explains that its trailing average cost of debt estimate mimics the staggered tranches debt portfolio strategy that any prudent borrower would employ. This means that interest rates for older, but still active tranches of debt is not out-of-date and instead remains relevant. See: IPART, *Submission on draft report, SA Water regulatory determination 2020*, Letter, 3 April 2020, p 1.

[19] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, p 4.

[20] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, paras 4.54.2, 4.64.

- no compensation to airports for the systematic risks that arise from uncertainty associated with pandemics, if that uncertainty occurs in between the current and previous IM reviews; and

- full compensation to airports for the systematic risks that arise from uncertainty associated with pandemics, if that uncertainty remains ongoing during an IM review.

This framework implies that airports will receive materially different compensation for their systematic risks depending on when an IM review occurs. Such an approach introduces additional regulatory uncertainty for investors, which in turn makes it more difficult for airports to raise capital for investments. Thus, Castalia's implicit framework will ultimately be detrimental to achieving the Part 4 purpose that seeks to promote the long-term interests of consumers and so should be given no weight by the Commission.

As such, we consider that historic betas remain the most appropriate estimate of the forward-looking asset beta of the benchmark efficient airport. Such an approach is less sensitive to the timing of individual IM reviews, since it compensates airports for the systematic risks of pandemics as they occur, regardless of whether they occurred during an IM review or in between IM reviews. It allows any COVID-affected observations to be excluded from the averaging period gradually after a 10-year period under the 2016 IM estimation methodology, or after a 15-year period if the Commission instead adopts the average asset betas observed from the last three five-year periods.

In our view, adopting historic betas as the estimate of forward-looking betas in this manner will promote regulatory certainty and promote the long-term benefits of consumers consistent with the Part 4 purpose.

2.2 A broad comparator sample of airports is most appropriate

In our previous report, we have set out our view that that the Commission should omit the country filter when identifying the sample of comparator airports, which will:[21]

- reduce the variance of the beta estimate without necessarily increasing the bias of the estimate compared to that of the Commission's smaller sample;

- reduce the need for detailed assessments of individual comparators and subjective decisions regarding whether individual companies should be included or excluded; and

- increase regulatory certainty while reducing the length and cost of consultations and discussions between airports and airlines, ultimately benefitting consumers in the long term.

In addition to these observations from our previous report, we observe that:

- omitting the country filter when identifying the sample of comparator airports is consistent with the Commission's six-step process for deriving asset beta estimates; and

- asset betas for water and energy utilities are of limited comparative value for deriving the benchmark airport asset beta.

2.2.1 Application of the six-step process supports adopting a broad comparator sample

As set out in section 2.1.1 above, the first step in the Commission's six-step process for calculating beta estimates involves identifying a sample of relevant comparator firms, which the Commission has historically implemented by identifying comparator airports.

In our previous report, we have explained that the sample of comparators should be chosen to balance the trade-offs between bias and variance.[22] We have also explained that the optimal filters to be applied may differ across industries, such that it may be optimal to use one of set of filters for regulated firms in a

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[21] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, pp 13-14.

[22] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 15.

particular industry while using a different set of filters for regulated firms in other industries.[23] Our assessment from our previous report is that it is appropriate for the Commission to expand its airport comparator sample by omitting the country filter. [24]

In contrast, Castalia supports the Commission's draft decision to adopt a narrower comparator sample. Specifically, Castalia considers that there is sound grounding for omitting market comparators operating in non-developed countries, although Castalia considers that the size of the market risk premium should have no bearing on the Commission's decision regarding whether a firm should be retained in the sample.[25]

In our previous report, we have observed that regulatory precedent by Courts in New Zealand and Australia and by other airport regulators either used a broad comparator sample or carried out detailed analysis of each comparator in a smaller sample.[26] Such analysis would include comparisons of factors such as each airport's: size; international hub status; extent of international operations; passenger numbers; and customer concentration risk.[27]

Both the Commission's draft decision and Castalia's submission have not carried out such detailed analysis of individual comparators, and instead have relied on broad filters to exclude groups of comparator airports. We consider that this approach is inconsistent with the first step of the six-step process, since it does not establish whether the sample contains relevant comparator firms whose systematic risks closely match that of the benchmark efficient airport.

As we have set out in our previous report, had the Commission carried out these comparisons, then the analysis likely would show that the three regulated New Zealand international airports have materially different characteristics compared to the comparator airports in the smaller sample that the draft decision adopts.[28]

In particular, we have observed in our previous report that:[29]

- a consistent application of the Commission's country filter would exclude Beijing Capital International Airport, which operates in China;

- Sydney Airport should be excluded since it was delisted on 10 March 2022, with regulatory precedent from the CAA and CAR also supporting its removal;[30]

  > the Commission's draft reasoning for its inclusion also will no longer apply for the 2030 IM, since Sydney Airport would have been delisted for approximately eight years by then; and

- a consistent application of the Commission's liquidity filter would exclude Vienna Airport, given its low free float percentage of 10.00 per cent;[31]

- the CAA excluded from its comparator sample Sydney Airport due to its delisting and Vienna Airport due to unreliable beta data;[32]

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[23] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 16.

[24] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 14.

[25] See: Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, pp 4-7.

[26] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 21.

[27] See: *Perth Airport Pty Ltd v Qantas Airways Ltd [No 3]* [2022] WASC 51 para 264.

[28] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, pp 21-25.

[29] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, pp 23-25.

[30] See, for example: Commission for Aviation Regulation, *Decision on an interim review of the 2019 determination in relation to 2023-2026*, Commission paper 7/2022, 23 December 2022, para 10.27. Flint (advisor to the UK CAA), *Support to the Civil Aviation Authority: H7 updated beta assessment*, May 2022, p 36.

[31] When identifying its energy comparator sample, the Commission flagged that Avangrid Inc had a low free float percentage of 18.30 per cent. See: NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, table A1, table B1.

[32] CAA, *Economic regulation of NATS (En Route) plc: Provisional Decision for the next price control review ("NR23")*, CAP 2553 July 2023, footnote 103.

- ADP, AENA and Fraport Group operate multiple airports, including several in non-developed countries;[33] and

- the CAA sets the WACC and asset beta for Heathrow Airport, which is an international hub that is the eighth busiest airport in the world,[34] compared to the Commission's task of deriving estimates for comparatively smaller airports in New Zealand.

In the absence of additional detailed analysis regarding the comparability of individual airports in the draft decision's smaller sample, it is unclear that the Commission's smaller sample will necessarily generate airport asset beta estimates that are more unbiased compared to the asset beta estimates generated from the larger sample updated using the methodology in the 2016 IM.

Furthermore, omitting all of the above firms will result in a small sample containing only two firms, ie, Auckland Airport and Zurich Airport, which we consider to be insufficient to generate a reliable estimate of the asset beta for the benchmark efficient airport.

Consequently, we continue to consider it appropriate for the Commission to expand its airport comparator sample by omitting the country filter. This is consistent with precedent from the 2016 IM and the QCA, which state that:[35]

- including firms from a wider cross-section of countries reduces the impact that individual country-specific effects will have on beta estimates;

- using a larger sample reduces the need to make subjective decisions regarding whether specific companies should be included or excluded;

- a larger sample provides regulatory predictability and reduces the impact of anomalous beta estimates.

Finally, we note that aside from supporting the use of a country filter, Castalia also supports removing:[36]

- firms with negative leverage; and

- firms that have delisted, are not involved in regulated airport operations, have a low percentage of aeronautical revenues, or had a low percentage of days traded.[37]

Castalia does not support the Commission's draft decision to remove firms with variable asset beta estimates, which the Commission assesses using bid-ask spreads, percentage of shares traded, and variability in asset beta across the daily, weekly and four-weekly data frequencies.[38]

Regarding the above filters, we consider it appropriate for the Commission to omit data that are illiquid, since this will result in beta estimates that are unlikely to reflect the underlying risks of the comparator airport. This means that the Commission should omit firms that have delisted or have a low percentage of days traded. We note that since this is a data-related issue, the airport should no longer be excluded if its data used to estimate the beta is liquid.

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[33] ADP, https://www.parisaeroport.fr/en/group/strategy/airport-network, accessed 11 July 2023. AENA, *Strategic plan 2022-2026*, pp 6, 38. Fraport, https://www.fraport.com/en/our-group/our-airports-and-subsidiaries.html, accessed 11 July 2023.

[34] See: Heathrow, https://www.heathrow.com/latest-news/what-makes-a-hub-airport, accessed 13 July 2023. Airports Council International, https://aci.aero/2023/04/05/international-travel-returns-top-10-busiest-airports-in-the-world-revealed/, accessed 13 July 2023.

[35] QCA, *Rate of return review*, Final report, November 2021, pp 71-72. NZCC, *Input methodologies review decisions | Topic paper 4: cost of capital issues*, 20 December 2016, para 277.1. HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 20.

[36] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, pp 4-7.

[37] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, pp 4-7.

[38] See: Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, pp 4-5.

In addition, we consider that:

- the airport comparator sample in CEPA's report already applies a filter for airport operations and aeronautical revenues, such that the 2016 IM methodology already considers regulated airport operations and percentage of aeronautical revenues, although:[39]

    > as set out in our previous report, we consider that Japan Airport Terminal Co Ltd has been incorrectly excluded, given that precedent from the Supreme Court of Western Australia supports its inclusion;[40] and

    > we agree with Castalia that there is no theoretical or empirical grounding for excluding airports on the basis of volatility across daily, weekly and four-weekly estimates; and

- the 2016 IM's negative leverage adjustment, which retains firms with negative leverage but sets the leverage for these firms to zero, is sufficient to eliminate any potential distortions of negative leverage and does so in a conservative manner, such that it is valuable to continue including these firms in the comparator sample.

2.2.2   Limited comparative value of water and energy utility asset betas

TDB Advisory argues that aeronautical service activities have a risk profile that is closer to that of utility and infrastructure providers compared to retail and recreation service providers:[41]

> From a broader perspective, however, we continue to argue that economic entities that are largely focused on providing and/or using core economic infrastructure tend to have lower asset betas than those that are more dependent on discretionary, consumer-driven preferences. This argument is illustrated in Table 1 below – drawn from the international database compiled by Aswath Damodaran at the Stern School of Business NYU. **While airports are not specifically identified, we suggest the core aeronautical service components of their activity would come closer in risk profile to the lower-beta utility and infrastructure providers (with asset betas in the range of 0.44 to 0.54) in the table, rather than the higher-beta retail and recreation service providers (with asset betas in the range of 0.73 to 0.99).** (emphasis added)

In our view, the subjective relativity of asset betas observed for water and energy utilities are of limited value for assessing the benchmark asset beta of an airport.

As set out in section 2.1.1 above, the first step in the Commission's six-step process for calculating beta estimates involves identifying a sample of relevant comparator firms, which the Commission has historically implemented by identifying comparator airports, instead of referring to businesses in other infrastructure industries.

Furthermore, CEPA's estimates of asset betas for the Commission's airport and energy samples suggest that airports face materially different systematic risks compared to utilities, and will thus have materially different asset betas.

This can be seen in figure 2.1 below, which we reproduce from figure 3.1 of our earlier report. The figure shows the asset beta percentiles for both the airport and energy comparator samples, and it can be seen that:

- the asset beta estimates for airport comparators are materially higher than the corresponding asset beta estimates for energy comparators at the same sample percentile;

    > this observation applies both to the 2016 IM airport comparator sample ('CEPA airport') and the draft decision airport comparator sample ('NZCC airport'); and

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[39] CEPA, *Review of cost of capital 2022/2023 | New Zealand Commerce Commission*, 29 November 2022, pp 6-7.

[40] *Perth Airport Pty Ltd v Qantas Airways Ltd [No 3]* [2022] WASC 51 para 267. HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 21.

[41] TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023, p 5.

- airport comparators exhibit more diverse asset betas, and are spread fairly evenly across the full asset beta range, ie, 0.35 to 1.16 for CEPA's airport comparators and 0.42 to 0.98 for the airport comparators in the draft decision, while over 70 per cent of energy comparators have asset betas clustered between 0.2 and 0.4.

These results suggest that the only potentially useful cross-check that can be drawn from water and energy utility asset betas is that the Commission's benchmark airport asset beta must be higher than its benchmark energy asset beta.

Figure 2.1: Asset beta percentiles for airport and energy comparators
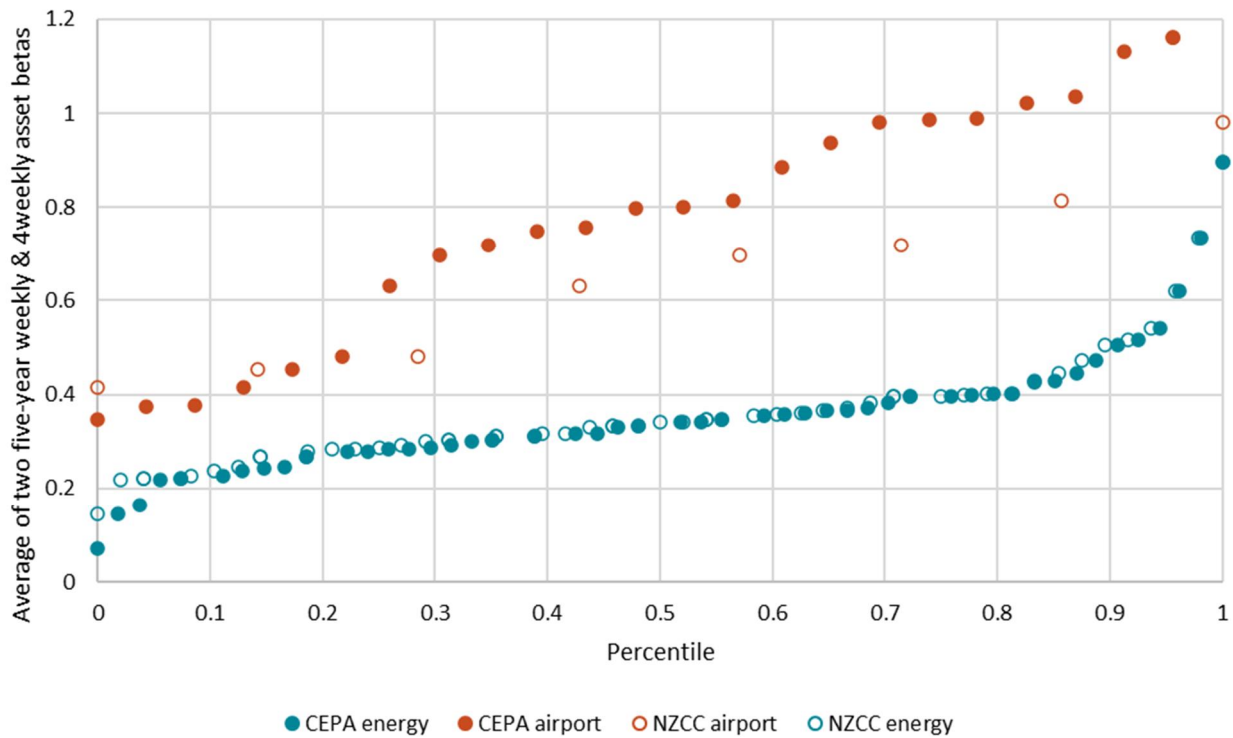
Source: CEPA, Review of cost of capital 2022/2023, 29 November 2022, pp 55-58. HoustonKemp analysis. We generate percentiles using Excel's 'percentrank' function. The number of dots may be less than the sample size due to multiple observations having the same percentile.

2.3   Limited value of analysing RAB multiples

TDB Advisory considers that RAB multiples provide the most robust test of the reasonableness of the Commission's WACC estimate.[42]

Castalia similarly agrees with the findings of the Commission's RAB multiples analysis, but notes that the light-handed nature of the regulatory regime for airports makes it difficult to identify how far the implied RAB multiple reflects the Commission's views on the appropriate cost of capital compared to investors' views of the regulatory regime as a whole.[43]

However, the Commission has noted in its draft decision that there are several limitations to its RAB multiples analysis, including:[44]

- the limited number of data points;

- the possibility that other factors such as opex and capex outperformance may affect RAB multiples; and

- difficulty in isolating the enterprise value of the regulated activities of a business, due to uncertainty over the value of unregulated activities.

We further observe that the limitations identified by the Commission apply even more strongly to airports. This is because airports tend to have substantial non-aeronautical revenues that are more difficult to isolate compared to an energy distribution business with non-vertically integrated assets, particularly in cases where the book value of a non-aeronautical asset is materially lower than its market value.[45]

Furthermore, analyst estimates of RAB multiples necessarily feature subjective assumptions about the future growth of the business's unregulated activities, which tend to differ materially if the business is engaged in substantial unregulated activities.

Consistent with this, we observe that the Commission refers to two RAB multiple estimates for Auckland International Airport Ltd that differ materially, with Forsyth Barr estimating a RAB multiple of 1.9x and UBS estimating a RAB multiple of 1.3x.[46]

The wide range of RAB multiple estimates for Auckland International Airport Ltd contrasts with the narrower range that the Commission reports for energy business, which includes:[47]

- Jarden's estimates of 1.00x for gas distribution business and 1.23x for electricity distribution businesses;

- UBS' estimate of 1.3x for Vector; and

- the Commission's estimate of 1.38x for Eastland Group.

In our view, the wider RAB multiple range for Auckland International Airport Ltd highlights the difficulty of estimating RAB multiples accurately for airports, with the effect that the RAB multiple estimate is of limited value for assessing the appropriateness of the Commission's airport WACC estimates.

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[42] TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023, pp 7-8.

[43] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, p 4.

[44] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, para 7.53.

[45] For example, if the book value of an airport's land is set to zero after being fully depreciated, then the RAB multiple for the airport is likely to be very high.

[46] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, table 7.6.

[47] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, table 7.6.

Finally, TDB Advisory cites the sale prices for Eastland Network and for Sydney Airport as an indication that that the airport sector continues to provide attractive opportunities for investors:[48]

> Although occurring in a different sector, the Eastland Network sale provides a recent direct market test of the Commission's overall regulatory framework and its implications. The fact that Eastland sold at a value of nearly 1.4 times the RAB confirms that investors were more than sufficiently compensated for the risks they faced.
>
> We also note the long-term growth and strength in Auckland Airport's share price, now largely recovered from its pandemic-related downturn. In a different context and regulatory regime, Sydney Airport was sold in 2022 at a significant premium over its prior market value.
>
> These last two observations are, we think, consistent with a broader view that the airport sector has been and probably remains an attractive proposition for the local and global investment community.

We disagree with TDB Advisory regarding the comparative value of these asset sales. In our view, RAB multiples observed for businesses outside the airport industry and/or in other regulatory regimes provide no meaningful indication about the appropriateness of the Commission's airport WACC estimates.

This is because the RAB multiples from other industries and/or other regulatory regimes will incorporate differences that are unrelated to the Commission's airport WACC estimates. These differences would including explicit incentive frameworks, for example, the AER allows regulated electricity businesses to retain 30 per cent of any capex outperformance as well as approximately 30 per cent of any opex efficiency, this would have material impact on the RAB multiples observed for these firms.

Consequently, we consider that only RAB multiples associated with the three regulated New Zealand international airports will provide some indication about the appropriateness of the Commission's airport WACC estimates, although we note that any such RAB multiples continue to be of limited value for the reasons set out above.

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[48] TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023, p 8.

3. Removal of the -0.05 asset beta adjustment

The 2016 IM applied a 0.05 downward adjustment to the average asset beta observed from the airport comparator sample. The draft decision finds that a downward adjustment to the asset beta is not justified, and thus omits the adjustment.

The submissions to the Commission's draft decision indicates some consensus that the asset beta downward adjustment is not justified for airports, although the consensus is not unanimous. In particular, Qantas' submission includes scatterplots that show a negative correlation between airport asset betas and the percentage of contributions of aeronautical revenues.

The information in Qantas' submission is insufficient for us to assess the regression results. However, we observe at a high level that Qantas' regression slope for 2012-2017 appears to be statistically insignificant even at 10 per cent significance, and that Qantas' estimates of aeronautical revenue percentages may be unreliable.

Consequently, we continue to agree with the Commission's draft decision to omit the adjustment.

3.1 Some consensus that the downward adjustment is not justified for airports

In our previous report, we have indicated our agreement with the Commission's finding that there is no evidence to support the 0.05 downward asset beta adjustment.[49]

Similarly, the submissions to the Commission's draft decision indicate some consensus that the 0.05 downward asset beta adjustment is not justified for airports, although the consensus is not unanimous. In particular:[50]

- Castalia supports the Commission's draft decision to remove the downward adjustment in asset betas;

- TDB Advisory agrees that definitive conclusions cannot be drawn about the relationship between asset betas and the mix of aeronautical and non-aeronautical services, but continues to consider that further adjustment is appropriate to acknowledge the significance of retail and other non-aeronautical services for certain comparators; and

- Qantas considers that the downward adjustment remains justified.

3.2 Correlation between asset beta and percentage of aeronautical revenues

Qantas' submission includes scatterplots and regressions of five-year asset betas against aeronautical revenues percentages for the eight airports in the draft decision comparator sample plus Bologna Airport.[51] In figure 3.1 below we show the scatterplots from figure 2 of Qantas' submission, which show Qantas' regression results.

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[49] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, p 2.

[50] Castalia, *Comments on the Commerce Commission cost of capital Input Methodologies Draft Decision for regulated airport services*, 19 July 2023, p 8. TDB Advisory, *NZ Commerce Commission: Part 4 Input Methodologies Review 2023 – Draft decision*, July 2023, pp 6-7.

[51] Qantas, *RE: Part 4 Input Methodologies Review 2023 - Draft decision*, Letter, 19 July 2023, p 2.

Qantas suggests that the results show a strong correlation between the percentage of contributions of aeronautical revenue and asset beta, and that a downward adjustment for Auckland Airport is appropriate.[52]

Figure 3.1: Qantas' regression of five-year asset beta against aeronautical revenue percentage
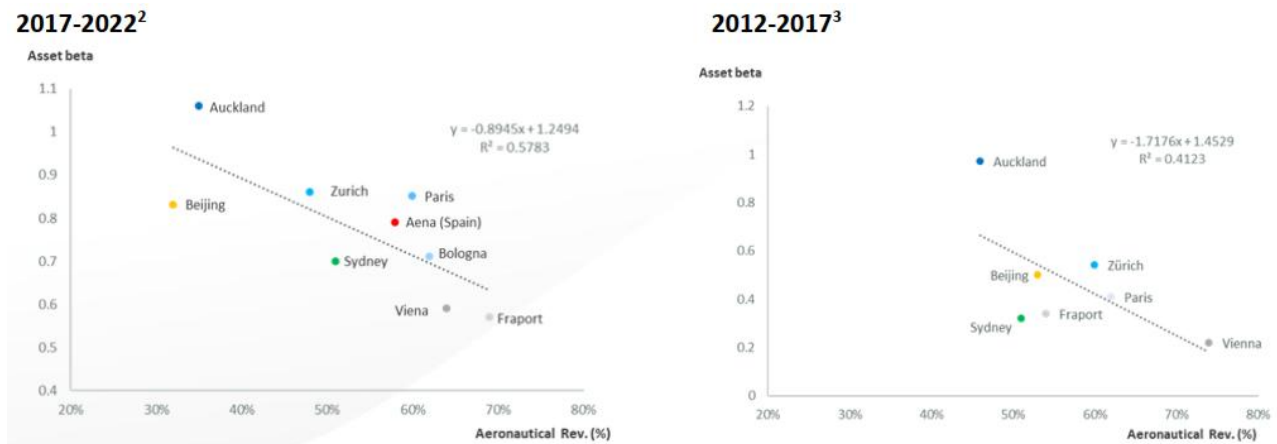
(2): Aeronautical revenue is from financial year 2022 sourced from company financial statements; Asset beta is for 5 years (2017-2022) (3): Aeronautical revenue is from financial year 2017 sourced from company financial statements; Asset beta is for 5 years (2012-2017)
Source:2022 Annual Reports; Commerce Commission Cost of Capital Topic paper, Table A3

Source: Screenshot from Qantas, RE: Part 4 Input Methodologies Review 2023 - Draft decision, Letter, 19 July 2023, p 2, figure 2.

The information in Qantas' submission is insufficient for us to assess the regression results. In particular, Qantas has not provided:

- the standard errors or statistical significance of its regression estimates; or
- its methodology for deriving the aeronautical revenue percentages for each airport.

However, we observe at a high level that:

- Qantas' regression slope for 2012-2017 appears to be statistically insignificant, even at 10 per cent significance;[53] and
- Qantas' estimates of aeronautical revenue percentages are unreliable.

Regarding the second dot point, we observe that Qantas has used aeronautical revenue percentages for Auckland Airport that do not match the data set out in annual disclosures, namely:[54]

- Auckland Airport's total regulatory income for 2022 is $128.3 million, which is approximately 43 per cent of its $300.3 million total revenue in that year, compared to Qantas' estimate of approximately 35 per cent in its 2017-2022 scatterplot; and
- Auckland Airport's total regulatory income for 2017 is $323.8 million, which is approximately 51 per cent of its $629.3 million total revenue in that year, compared to Qantas' estimate of approximately 45 per cent in its 2012-2017 scatterplot.

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[52] Qantas, *RE: Part 4 Input Methodologies Review 2023 - Draft decision*, Letter, 19 July 2023, p 2.

[53] The standard error of a regression slope coefficient is equal to the absolute value of: $Slope\ coefficient \times \sqrt{\frac{1-R^2}{(n-2) \times R^2}}$. We use this formula to calculate the standard error of Qantas' 2012-2017 regression slope. The resulting t-statistic has a p-value of 0.12.

[54] See: Auckland Airport, *Annual information disclosure*, Regulatory performance summary for the year ended 30 June 2022, schedule 2 ref 18. Auckland Airport, *Annual information disclosure*, Regulatory performance summary for the year ended 30 June 2017, schedule 2 ref 18. Auckland Airport, *Financial report 2022*, p 7. Auckland Airport, *Annual report 2017*, 2017 financial statements, p 1.

We also observe that the aeronautical revenue percentages for several airports have shifted materially between Qantas' 2017-2022 and 2012-2017 scatterplots. This further suggests that Qantas' estimates may be unreliable, since:

- Qantas may have measured the aeronautical revenue percentages inconsistently across the two scatterplots; and

- Qantas' analysis may be affected by shocks from individual years that are not comparable to the airport asset betas measured over a five-year estimation period.

For example, we observe that Qantas reports Fraport's aeronautical revenue percentage at approximately 55 per cent in 2017 and approximately 70 per cent in 2022.[55] It is unclear how Qantas derives these percentages, but our various attempts to reproduce Qantas' aeronautical revenue percentages for Fraport do not generate such a material increase between 2017 and 2022. The various methods we have used in our attempt to replicate Qantas' estimates and the aeronautical revenue percentages they give include:[56]

- calculating aeronautical revenues as the sum of 'aviation' revenues and international 'aviation' revenues, which results in aeronautical revenue percentages of 47 per cent in 2017 and 45 per cent in 2022;

- further including ground handling 'infrastructure charges' as part of aeronautical revenues, which results in aeronautical revenue percentages of 57 per cent in 2017 and 52 per cent 2022; and

- further including all ground handling charges as part of aeronautical revenues, which results in aeronautical revenue percentages of 69 per cent in 2017 and 62 per cent in 2022.

This suggests that Qantas may have measured Fraport's aeronautical revenue percentages in an inconsistent manner across both years.

We observe a similar inconsistency in Qantas' estimates of the aeronautical revenue percentages for Vienna Airport, ie, approximately 75 per cent in 2017 and approximately 65 per cent in 2022. Once again, it is unclear how Qantas derives these percentages. The various methods used in our attempt to replicate Qantas' estimates and the aeronautical revenue percentages they give include:[57]

- calculating aeronautical revenues as the external revenues for the 'airport' segment results in aeronautical revenue percentages of 49 per cent in 2017 and 46 per cent in 2022;

- further including external revenues for the 'handling & security services' segment results in aeronautical revenue percentages of 70 per cent in 2017 and 64 per cent in 2022.

This also suggests that Qantas may have measured Vienna Airport's aeronautical revenue percentages in an inconsistent manner across both years.

We consider that these issues largely invalidate Qantas' conclusion that the 0.05 negative asset beta adjustment is justified. Consequently, we continue to agree with the Commission's draft decision to omit the adjustment.

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[55] These aeronautical revenue percentages are not exact since we have calculated them by measuring the individual observations on Qantas' scatterplots. The exact percentages are not set out in Qantas' report.

[56] See revenue breakdowns in Fraport's 2022 and 2018 annual reports. We note that we refer to the 2017 revenues set out in the 2018 annual report instead of the 2017 annual report since the latter does not categorise international revenues into aviation and non-aviation categories. See: Fraport, *Annual report 2022*, p 170. Fraport, *Annual report 2018*, p 168. Fraport, *Annual report 2017*, p 162.

[57] See revenue breakdowns in Vienna Airport's 2022 and 2017 annual reports: Flughafen Wien AG, *Annual financial report 2022*, p 21. Flughafen Wien AG, *Annual report 2017*, p 106.

4. Retaining Auckland Airport as a comparator

Qantas considers that Auckland Airport should be omitted from the comparator sample. Although Qantas reasons that Auckland Airport's equity beta estimate is distorted by its 6 per cent representation on the market index, we consider that:

- Qantas' submission only shows that Auckland Airport has an equity beta that is higher than the average, without demonstrating that any such distortion exists; and

- given that Auckland Airport's equity beta is higher than one and its asset beta is above the average observed for the comparator sample, then removing any potential bias would require an uplift to be added to the sample average asset beta.

Instead, we consider that it is important to retain Auckland Airport as a comparator, since it is the only is the only regulated New Zealand international airport that is publicly listed. This is consistent with the reasoning set out in other parts of the Commission's draft decision.

4.1   Any potential bias in Auckland Airport's equity beta is likely to be negative

Qantas submits that Auckland Airport's equity beta estimate is distorted by its 6 per cent representation on the market index.[58]

We observe that Qantas has changed its reasoning between its submissions for the emerging views phase and for the draft decision. In particular:[59]

- Qantas' submission for the emerging views phase asserts that Auckland Airport's 6 per cent representation on the index introduces an upward bias; and

- Qantas' submission for the draft decision refers to a scatterplot of equity beta against gearing for the subset of airports in the comparator sample that operate in developed markets, and argues based on the scatterplot that Auckland Airport's equity beta estimate is biased upwards.

We have addressed the first dot point above in our previous report. Specifically, Auckland Airport's observed equity beta has historically been higher than one, such that any potential bias would be downward, ie, Auckland Airport's equity beta would be underestimated.[60]

The same observation also applies to Qantas' submission for the draft decision, ie, the second dot point above. In particular, any potential bias that arises from Auckland Airport's representation on the index applies only when estimating its equity beta, ie, step two of the six-step process set out in section 2.1.1 above. Any potential bias at this step of the process will pass through to subsequent steps in the same direction, such that a downward bias in Auckland Airport's equity beta will result in a downward bias in the benchmark re-levered equity beta.

Consequently, the scatterplot that Qantas presents in its submission for the draft decision does not demonstrate that Auckland Airport's equity beta estimate has an upward bias. Instead, the scatterplot only shows that Auckland Airport has an equity beta that is higher than the average of the sample given its level of gearing, in other words, it is restating a fact that is already acknowledged which is that Auckland Airport's asset beta is higher than the sample average airport asset beta.

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[58] Qantas, *RE: Part 4 Input Methodologies Review 2023 - Draft decision*, Letter, 19 July 2023, p 1.

[59] Qantas, *Re: CEPA Report on Aspects of the Cost of Capital Input Methodologies for the 2023 Review*, Letter, 17 February 2023, p 1.
Qantas, *RE: Part 4 Input Methodologies Review 2023 - Draft decision*, Letter, 19 July 2023, pp 1-2.

[60] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, pp 41-43.

Qantas' submission therefore does not address the observation set out in our previous report, namely that if an airport with a high representation on the market index has an equity beta greater than one, then any potential bias is negative. Instead, the fact that Auckland Airport's asset beta is materially higher than the sample average may indicate that the Commission is underestimating the benchmark airport asset beta in its draft decision, since Auckland Airport's status as the only publicly traded airport operating in New Zealand makes it an important comparator.

Furthermore, as we explain in our previous report, the fact that Auckland Airport's asset beta is above the average observed for the comparator sample implies that removing such bias would require an uplift to be added to the sample average asset beta. If the Commission were to remove Auckland Airport from the sample, then this would introduce additional bias to the sample average asset beta.

In any case, we also consider that a 6 per cent weight remains acceptably low, such that the equity beta and corresponding asset beta estimated for Auckland Airport are unlikely to be biased materially.

4.2   Importance of retaining Auckland Airport in the comparator sample

In addition to our observations in section 4.1 above, we continue to underscore the importance of retaining Auckland Airport in the comparator sample.

As we have set out in our previous report, the asset beta for Auckland Airport is a highly relevant cross check for the Commission's airport asset beta estimate, since Auckland Airport is the only regulated New Zealand international airport that is publicly listed.[61]

Consistent with this, we have also observed in our previous report that the Commission's draft decision:[62]

- assesses the COVID-19 premium based on data from Auckland Airport, in addition to carrying out an assessment using its comparator sample; and

- observes that Vector has a high bid-ask spread and low free float percentage, but the Commission has decided to include Vector in its energy comparator sample, noting that Vector also has a low asset beta variability and is 'an important comparator because it is the only New Zealand firm in the sample'.

As such, for this reason and for the reasons set out in section 4.1 above, we disagree with Qantas' recommendation that Auckland Airport should be removed from the comparator set.

In our view, omitting Auckland Airport will not improve the accuracy or precision of the Commission's benchmark airport asset beta estimate. Instead, it is likely to add downward bias to the estimate and remove an important comparator from the sample.

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[61] HoustonKemp, *Comment on the Commerce Commission's draft asset beta methodology*, 19 July 2023, pp 41-43.

[62] NZCC, *Cost of capital topic paper | Part 4 Input Methodologies Review 2023*, Draft decision, 14 June 2023, paras 4.61-4.64.

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