## **APPENDIX 1**

Airline Submissions	Points addressed in submissions
Air NZ	
Comparator sample	Paragraphs [58] to [109] of WIAL submission
Agrees with Commission's comparator sample for asset beta with the exception of Beijing Capital International Airport, which should be removed on the same basis as for other Chinese airports.	Sections 3.1 and 3.2 of HoustonKemp report
	Paragraphs [39] to [61] and [133] to [162] of NZ Airports submission
	Sections 2.3, 4.2, 4.3 and 6.1 of CEG report
	Sections 2.1 to 2.6 of Incenta report
	Paragraphs [25] to [30] and [34] to [41] of WIAL's cross-submission
	Section 2 of HoustonKemp report for cross-submissions
Reasonableness checks	Paragraphs [116] to [118] of WIAL submission
Reasonableness checks suggest midpoint WACC is generous (e.g. RAB multiples).	Section 5 of HoustonKemp report
	Paragraph [44] of NZ Airports submission
	Section 7.4 of CEG report
	Paragraphs [71] to [75] of WIAL cross-submission
Other issues	Paragraphs [116] to [118] and [126] to [136] of WIAL submission
Asset beta is generous. As TDB argues, airports are closer to a utility beta ("core economic infrastructure").	Section 2 of HoustonKemp report
AIAL share price did not materially shift when draft decision issued.	Paragraphs [37] to [38] of NZ Airports submission
Castalia for Air NZ	
Comparator sample	Paragraphs [58] to [109] of WIAL submission
Use of judgement and lack of underlying data makes it difficult to independently verify the	Sections 3.1 and 3.2 of HoustonKemp report
Commission's application of its stated method. So have approached this from first principles. Do not support the Commission's exclusion of firms with unusually variable beta estimates: no	Paragraphs [133] to [162] of NZ Airports submission

theoretical/empirical basis for that.	Sections 4.2, 4.3 and 6.1 of CEG report
Agree that comparator sample should include only firms that operate in developed markets. Agree with CEG that systematic risk of emerging markets is accounted for in MRP rather than beta. But there are other reasons to exclude emerging markets.	Sections 2.1 to 2.6 of Incenta report Paragraphs [25] to [30], [34] to [41] and [43] to [44] of WIAL's cross-submission
In emerging markets, capital movements are restricted in idiosyncratic ways, which affects the observed relationship between average market returns and individual stocks.	Section 2 of HoustonKemp report for cross-submissions
Airports disproportionately affected by arbitrary government action, which is more likely in emerging markets, and this non-systematic effect is seen in beta rather than MRP (e.g. China).	
Beijing Capital International Airport should therefore be excluded as its operations are in China (despite being listed in Hong Kong).	
COVID impact	Paragraphs [13] to [15] and [110] to [118] of WIAL submission
Has elements of both systematic and unsystematic risk.	Section 4.1 and 4.2 of HoustonKemp report
Commission's approach of adjusting pre-pandemic betas (option 3) is preferable given the post- pandemic data sample (first best solution) is too small.	Paragraphs [163] to [190] of NZ Airports submission
	Sections 2.5, 8.2 and 9.1 of CEG report
Using the average of the last two five year periods (option 4: approach to date) should only be used as the absolute upper bound estimate.	Section 2.7 of Incenta report
Cross-checks support the Commission's approach, suggesting the market has priced in a frequency of COVID events (20-50 years) comparable to TDB's implementation of Flint's method. Intuitively this makes sense.	Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission
A4ANZ	
Comparator sample	Paragraphs [58] to [109] of WIAL submission
Supports Commission position.	Sections 3.1 and 3.2 of HoustonKemp report
	Paragraphs [39] to [61] and [133] to [162] of NZ Airports submission
	Sections 2.3, 4.2, 4.3 and 6.1 of CEG report
	Sections 2.1 to 2.6 of Incenta report
	Paragraphs [25] to [30] and [34] to [41] of WIAL's cross-submission
	Section 2 of HoustonKemp report for cross-submissions
COVID impact	Paragraphs [13] to [14] and [110] to [115] of WIAL submission

Supports Commission position.	Sections 4.1 and 4.2 of HoustonKemp report
	Paragraphs [163] to [190] of NZ Airports submission
	Sections 2.5, 8.2 and 9.1 of CEG report
	Section 2.7 of Incenta report
	Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission
Reasonableness checks	Paragraphs [18] to [27] and [126] to [136] of WIAL submission
AIAL experience indicates regulation of airports is not achieving s 52A purpose. Pre-COVID,	Sections 2.2.1 and 5 of HoustonKemp report
Frontier Economics founds AIAL had made more than \$3.6b in excess profits and failed to invest properly.	Paragraphs [33] to [35],[44] and [74] to [76] of NZ Airports submission
AIAL is now proposing to spend \$5.6b in capex at a WACC of 8.73%. Suggests that airport	Paragraphs [71] to [75] of WIAL cross-submission
regulation should be ratcheted up.	
BARNZ	
Comparator sample	Paragraphs [58] to [109] of WIAL submission
Supports Commission position.	Sections 3.1 and 3.2 of HoustonKemp report
	Paragraphs [39] to [61] and [133] to [162] of NZ Airports submission
	Sections 2.3, 4.2, 4.3 and 6.1 of CEG report
	Sections 2.1 to 2.6 of Incenta report
	Paragraphs [25] to [30] and [34] to [41] of WIAL's cross-submission
	Section 2 of HoustonKemp report for cross-submissions
COVID impact	Paragraphs [110] to [118] of WIAL submission
Using the customary approach will make COVID impact "permanent" in this IMs Review cycle,	Sections 4.1.1 and 4.3 of HoustonKemp report
overstating COVID impact on asset betas.	Paragraphs [163] to [190] of NZ Airports submission
Future pandemics are unlikely to result in border closures to the same degree because states have "learned much from their experience".	Sections 2.5, 8.2 and 9.1 of CEG report
	Section 2.7 of Incenta report

	Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission
Other issues IMs Review and PSEs: AIAL is purporting to price against its assumption of what IM Review will eventually conclude. Commission should consider intervening to prevent airports gaming timing of PSEs relative to IMs Reviews. Specifically, airports should not be able to adopt inputs from future IMs decisions and apply them to PSEs occurring now.	Paragraphs [131] to [136] of WIAL submission Paragraphs [37] to [38] of NZ Airports submission
TDB for BARNZ	
Comparator sample   Agree with Commission's position.   COVID impact   Agree with the Commission's position. COVID-type events will be rare and impact of future COVID-type events would be mitigated by lessons learned by policy-makers.   Continuing the Commission's traditional approach would overstate the likely systematic impact of	Paragraphs [58] to [109] of WIAL submissionSection 3.1 and 3.2 of HoustonKemp reportParagraphs [39] to [61] and [133] to [162] of NZ Airports submissionSections 2.3, 4.2, 4.3 and 6.1 of CEG reportSections 2.1 to 2.6 of Incenta reportParagraphs [25] to [30] and [34] to [41] of WIAL's cross-submissionSection 2 of HoustonKemp report for cross-submissionsParagraphs [110] to [118] of WIAL submissionSection 4.1 and 4.2 of HoustonKemp reportParagraphs [163] to [190] of NZ Airports submission
the pandemic going forward.    Downward adjustment   Broadly comfortable that no downward adjustment is applied for multi-divisional firms because it is addressed through selection of the sample. But still a case for a downward adjustment.   But suppliers that are "largely focused on providing/using core economic infrastructure tend to have lower asset betas than thosedependent on discretionary consumer-driven preferences".	Sections 2.5, 8.2 and 9.1 of CEG report Section 2.7 of Incenta report Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission Paragraph [9] of WIAL submission Section 1 of HoustonKemp report Paragraphs [58] to [61] of NZ Airports submission
Airports similar to traditional utilities in that respect. The two airports in the Commission's sample with highest proportion of aero services have below-	

average betas and vice versa.	
Reasonableness checks	Paragraphs [13] to [15] of WIAL Submission
7.19% WACC positioned appropriately between yields on high quality corporate bonds and the	Section 5 of HoustonKemp report
share market as a whole. Within the range of investment bank WACC estimates for airports. Commission correctly follows court guidance to cross-check based on NZ evidence.	Paragraphs [33] to [35] and [44] of NZ Airports submission
RAB multiples provide a more robust test. Support the Commission's reliance on RAB multiples in	Sections 7.1 and 7.4 of CEG report
the 1.3-1.9 range, which demonstrates investors are adequately compensated. Eastland also provides an example. Note also AIAL's long-term share price.	Paragraphs [71] to [75] of WIAL cross-submission
Dr Martin Lally	
COVID impact	Paragraphs [110] to [118] of WIAL submission
Acknowledges that merits of Commission's approach are contentious given difficulty of estimating	Section 4.1 and 4.2 of HoustonKemp report
long-term probability of events.	Paragraphs [163] to [190] of NZ Airports submission
Comments on the mechanism of the Commission's adjustment.	Sections 2.5, 8.2 and 9.1 of CEG report
	Section 2.7 of Incenta report
	Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission
ΙΑΤΑ	
Comparator sample	Paragraphs [58] to [109] of WIAL submission
Supports narrower sample, but should exclude Beijing.	Sections 3.1 and 3.2 of HoustonKemp report
	Paragraphs [39] to [61] and [133] to [162] of NZ Airports submission
	Sections 2.3, 4.2, 4.3 and 6.1 of CEG report
	Sections 2.1 to 2.6 of Incenta report
	Paragraphs [25] to [30], [34] to [41] and [51] to [54] of WIAL's cross-submission
	Section 2 of HoustonKemp report for cross-submissions
<u>Covid impact</u>	Paragraphs [110] to [118] of WIAL submission
Prefers Commission's option 2 on COVID impact (rather than option 3).	Section 4.1 and 4.2 of HoustonKemp report

	Paragraphs [163] to [190] of NZ Airports submission
	Sections 2.5, 8.2 and 9.1 of CEG report
	Section 2.7 of Incenta report
	Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission
Downward adjustment	Paragraph [9] of WIAL submission
Commission should reconsider removing downwards adjustment as airports in the sample all have	Section 1 of HoustonKemp report
activities that could increase their business risk.	Paragraphs [58] to [61] of NZ Airports submission
	Paragraphs [12] to [15] and [64] to [70] of WIAL cross-submission
	Section 3 of HoustonKemp report for cross-submissions
Qantas	
Comparator sample	Paragraphs [58] to [109] and [119] to [121] of WIAL submission
Commission should have applied a market diversification filter to recognise that AIAL is	Sections 3.1, 3,2 and 5.2 of HoustonKemp report
overweighted in the NZX (~6%). AIAL's share of the index distorts its equity beta estimate and introduces an upward bias.	Paragraphs [133] to [162] of NZ Airports submission
Qantas recommends removing AIAL from the sample!	Sections 4.1, 4.4 and 4.5 CEG report
	Sections 1.1 and 2.2 of Incenta report
	Paragraphs [25] to [30], [34] to [41] and [45] to [50] of WIAL's cross-submission
	Sections 2 and 4 of HoustonKemp report for cross-submissions
COVID impact	Paragraphs [110] to [118] of WIAL submission
Supports Commission's position.	Sections 4.1 and 4.2 of HoustonKemp report
	Paragraphs [163] to [190] of NZ Airports submission
	Sections 2.5, 8.2 and 9.1 of CEG report
	Section 2.7 of Incenta report
	Paragraphs [19] to [24] and [55] to [63] of WIAL's cross-submission

Downward adjustment	Paragraph [9] of WIAL submission
The sample shows a correlation between percentage of revenue that is aero and asset beta.	Section 1 of HoustonKemp report
As an alternative to removing AIAL from the sample, Qantas recommends a downward adjustment to correct for AIAL's low share of aero revenue and large share of the market.	Paragraphs [58] to [61] of NZ Airports submission
to correct for AIAL's low share of aero revenue and large share of the market.	Paragraphs [12] to [15] and [64] to [70] of WIAL cross-submission
	Section 2 of HoustonKemp report for cross-submissions