TDB ADVISORY

IM Review 2023 Cost of Capital: Invitation to Cross-Submit on Specific Matters

A report prepared for the Board of Airline Representatives New Zealand Inc.

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1 Introduction and summary

We welcome the opportunity to provide comments on some specific matters raised in the CEG report[1] provided at the cross-submission stage of the IM review 2023 draft decisions.

In our comments below, we address CEG's claims regarding TDB's views on the comparator sample; CEG's assertion that TDB has likely made an error in its application of the Flint approach for estimating the impact of the COVID-19 pandemic; and the analysis in section 6.2 of the CEG report assessing the asset beta against various risk criteria.

To summarise our position:

- Our views on the most appropriate comparator sample have been fully consistent over time. Our principles and principled approach remains unchanged. Our views have simply evolved in the light of what is achievable given the data constraints, from a "first-best" position that turned out to be unachievable given the data constraints, to a "next-best" approach that yields a satisfactory and workable comparator sample set. Ideally, we would wish to see smaller airport operators operating just one airport in comparable jurisdictions in the comparator group. But there are simply not enough appropriate airports available to meet these criteria. As a result, we are comfortable with the inclusion of some larger airport operators operating in similar jurisdictions in the sample. We strongly agree that the Commission's use of a developed-country filter provides a key element of the comparability that is essential within the sample.

- We do not accept CEG's assertion that differences between its results and TDB's in applying the Flint methodology for estimating the effects of the pandemic probably reflect an error in TDB's analysis. CEG has not disclosed the details of its calculations so we are not able to comment in detail on CEG's approach, although we do note below several other unfounded allegations and errors in CEG's report. We have re-checked our own calculations and do not find an error in these. We also invite the Commission to review the files we have submitted to it with the details of our calculations.

- We disagree with CEG's claim that using specific airport characteristics such as route numbers and passenger volatility would provide a better basis for estimating the asset beta in the IM review. In our view, CEG's position on this matter stems more from bold assertions rather than from well-established theoretical foundations. In that regard, CEG comes close to implying that correlation equates to causation, which is clearly not the case. And most importantly, we view the airport characteristics that CEG wants to use as more likely to give rise to unsystematic risks, which are not compensated through the IM approach, rather than systematic risks. CEG has not established the linkages between route numbers, passenger volatility etc. and broader economic measures such as GDP, and so has not demonstrated that the risks in question cannot be mitigated through portfolio diversification.

[1] "Review of submissions on asset beta estimates for airports" (9 August 2023), by Competition Economics Group (CEG) for New Zealand Airports Association (NZ Airports Association).

2 Discussion

2.1 Comments on the comparator sample

The Commission asks for our comments on para. 30 of the August 2023 CEG report, which asserts that:

This evidence strongly supports the TDB May 2022 view that comparison to small airports similar to New Zealand airports is critically important. It provides only weak support for the NZCC draft decision and TDB July 2023 view that developed country status might be relevant. However, it provides no support for the NZCC draft decision and TDB July 2023 view which is, in effect, that developed country status is the only material determinant of airport asset betas.

We note first that at no point have we said that "comparison to small airports….is ***critically important***" (emphasis added). This and other wording is purely of CEG's own creation. In our July 2022 submission, we discussed briefly the pros and cons of larger versus smaller samples of comparator airports. We then went on to say that "*On balance, **we would prefer** that a smaller sample of more comparable firms be used"* (emphasis added). That is far from saying that a sample set based on small airports is critically important.

In our July 2022 submission, we also suggested that the comparator sample comprise smaller operators that have primary responsibility for just one airport. We recognize, however, that it has proven difficult (or even impossible) to draw together an adequate sample along these lines. There appear to be too few single airport operators, especially among developed countries.

As a result, we see it as a reasonable and pragmatic decision to move from the "first-best" preference we indicated in July 2022 to a "next-best" position and to support the comparator set the Commission proposes in its draft IM decisions. We do not see it as a problem (as CEG tries to portray it) to move from a preferred but unworkable position to a second-best but manageable one.

Furthermore, the fact that the new comparator set is drawn just from developed countries supports the comparability we have said we would like to see across the airport entities in the sample. As we indicated in our cross-submission of August 2023, the comparability of developed countries counterparts is reflected not only in the economic and financial underpinnings of the environment within which airports operate, but also in the quality of governance and other dimension of activity (likely including regulation) that can affect how airports operate in the markets concerned (see pages 5 and 6 of our August 2023 cross-submission).

2.2 Application of the Flint approach

The Commission has asked for our comments on CEG's claim that "...*it is likely that there is an error in the TDB application of the Flint method*" (para. 79).

We note first that the only basis on which CEG makes this claim is that their results regarding potential COVID uplifts to the asset beta differ from our own. As far as we are aware, CEG has not released any details of its own calculations so we are unable to check them. We have reviewed our own estimates and have not observed any errors in these. Further, it should be noted that we have estimated the betas in two different ways (using the regression slope and the covariance measure) as a cross-check and the two different methods yield the same results.

We have submitted to the Commission the files with our calculations and estimates of the uplift, and we would welcome the Commission reviewing our calculations further as part of its assessment of an appropriate COVID uplift.

While we would not go as far as CEG in asserting that any errors must belong to the other party, we note that the CEG report includes a number of unfounded or inaccurate comments regarding the analysis and findings of TDB and others. We pointed out above CEG's incorrect comments on our views regarding the comparator sample. We also note their comment (regarding beta estimates) that "*Castalia's and TDB's views are based on a misunderstanding of what asset beta observations measure*" (para. 92). This comment reflects CEG's view that asset betas "*measure how the stock market reacted to the actual shocks that hit the economy in the relevant estimation window – and do not measure the exposure to risks that did not actually eventuate* (para. 92).

To us, this statement by CEG is an extraordinary and incorrect interpretation of what betas measure. The stock price of any entity – along with its measured beta in any period – will respond not just to actual events affecting the entity concerned, but also to changing perceptions of risk that could affect the company's performance and prospects – whether or not such risks actually materialise. For example, defence, transport and other stocks will reflect changing perceptions of the probability of a war over Taiwan, even though no war has occurred to date. Heightened uncertainty and perceptions of risk surrounding a particular stock that cause it to fluctuate more widely – including in relation to the market benchmark – are likely to be reflected in an increase in its beta, again whether or not the actual shocks or other sources of concern eventuate.

Finally, we note that the CEG report includes a basic error in that the definition CEG provides of the asset beta (para. 101) is in fact the definition of the equity beta. We very much doubt that CEG would carry forward such an elementary mistake into their calculations.

2.3 Statistical analysis of asset beta

CEG presents statistical evidence linking asset betas to various airport characteristics, including the number of routes and passenger volatility, and claim that this evidence would provide a better basis for the Commission's asset beta estimates. We have several concerns about this analysis and about CEG's conclusions regarding the beta estimates.

First, beyond broad assertions about the potential impact of demand diversification, volatility etc. on asset betas, CEG does not provide or refer to any theoretical underpinnings regarding these relationships. Assertions by themselves do not provide enough weight for the Commission to pursue the approach CEG calls for.

Second, and related to the previous point: to use a commonly cited expression, "correlation does not imply causation." There is no doubt that Auckland Airport has an unusually high asset beta for airports, and that it operates in a relatively small market. The same might be said for some of the other airports in CEG's top left quadrant of Figure 6.1 (e.g., Malta). By the same token, we agree that airports such as Beijing, Frankfurt and Paris that are in the bottom right quadrant have lower asset betas than Auckland and operate in much bigger markets. As a result, the inverse slope to the regression line is not a surprise. But that evidence is far from being a theory of how asset betas should be determined or reliable evidence of how they are determined. We suspect that if one were to map the asset betas against, for example, the number of high-rise buildings in Auckland (along with Malta and some other top-left quadrant operators) versus the numbers in Beijing, Frankfurt and the Paris region, one would also find a clear inverse relationship. But that would clearly tell us very little about the fundamental determinants of the asset betas.

Third, and most crucially, we question the validity of using airport-specific characteristics such as route numbers, passenger volatility etc. as a basis for determining asset betas. As we see it, variations in these characteristics are in themselves more likely to give rise to *unsystematic* risks rather than *systematic* risks. Those unsystematic risks are risks that can be diversified away and for which no

allowance in the beta or compensation in the WACC is required. We feel it is worth repeating the Commission's original guidance on this matter:

In the context of the cost of capital, it is useful to distinguish between two types of risk, systematic risk and unsystematic risk:

Systematic risk reflects the extent to which an asset (or stock) participates in the fluctuations or movements in the overall market. Systematic risk of an asset (or stock) is therefore sometimes described as that component of risk that is 'correlated' with the overall market. Examples of systematic risks are the impact that changes in real GDP, inflation, currency movement, major technological advances and a recession have on the returns earned on an individual asset (or stock). The correlation of the returns on an asset with the value weighted return on all assets in the market is the asset's beta.

Unsystematic risk (or idiosyncratic specific asset risk) is the risk unique to a specific asset (or stock), and this component of the risk of an asset (or stock) is uncorrelated with general movements in the overall market. It includes the risks associated with an asset (or stock) that arise through increasing competition, changes to antitrust legislation, technological innovations, and geographic location. Empirical studies have generally found that the unsystematic or idiosyncratic risk will be eliminated (or diversified out of) through investors holding a sufficiently large portfolio of stocks. The unsystematic risk associated with an asset (or stock) is therefore also referred to as the 'diversifiable risk'. The risk that remains after diversification is the systematic risk, also referred to as the 'non-diversifiable' risk. [2]

We think that the specific airport characteristics that CEG would like the Commission to use in its asset beta estimates fall much more clearly in the category of unsystematic or idiosyncratic risks than the category of systematic risks. Well-diversified investors can largely remove these idiosyncratic risks by holding assets that are not influenced by such things as route numbers, passenger volatility etc.

We also find it notable that CEG quotes an ACCC view on this matter in its July 2023 submission. CEG reports the ACCC as stating:

However, the volatility of passenger numbers is relevant when considering relative differences in systematic risk between Australian airports. In particular, it is the extent to which this volatility is correlated with movements in the broader economy, as proxied by changes in GDP, which is most likely to mirror what is captured by an asset beta (para. 237).

CEG appears to draw on the first sentence of this statement but largely disregards the second sentence. The second sentence is crucial in identifying matters that should be incorporated into the beta and the WACC.

In conclusion, we think that the arguments CEG presents in its cross submission of 9 August 2023 fall far short of establishing a robust, analytically sound and convincing case for the Commission to depart from the principles, approach and findings it has set out in its draft IM decisions report.

Hence, we urge the Commission to stay the course with its draft decisions.

[2] Commerce Commission IM Reasons Paper December 2010, p. 182.