CROSS SUBMISSION ON THE SECTION 56G REVIEW

CHRISTCHURCH INTERNATIONAL AIRPORT

PROCESS AND ISSUES PAPER

5 April 2013

Executive Summary

1 The submissions from our customers confirm the point we reached in our pricing consultation: that there are only two material points of difference between us. These relate to our weighted average cost of capital and our treatment of taxation. While the cost of capital is a genuine difference, the issues around the treatment of taxation reflect a misunderstanding of our long-term pricing model. There is nothing in our treatment of taxation that leads to a higher price than would have resulted from the approach advocated by our customers.

2 Because inquiries tend to focus on the areas of disagreement rather than dwell on the points of consensus, we expect that these two issues will be central to the Commission's process. We have covered these issues in our submission and we make some further comments below. We look forward to discussing these matters with the Commission at the conference.

3 However it is also important not to lose sight of the very large number of significant areas where our airline customers agree with us. The Commission's approach of asking questions on all four limbs of the section 52A purpose statement has usefully teased this out. Areas where our customers agree with us include:

3.1 We are delivering an appropriate level of quality (following the commissioning of the ITP);

3.2 We are innovating appropriately and facilitating innovation by our customers;

3.3 We are operating and investing efficiently (and responded to feedback from our customers during consultations);

3.4 Our opex and capex forecasts are reasonable;

3.5 The commercial arrangements with Air New Zealand for the regional lounge are an example of agreeing a price / quality balance with our customers;

3.6 With one exception, there is agreement on the demand forecasts we used in our pricing; and

3.7 There is a high level of agreement on the perennial issues of asset valuation methodology, the treatment of revaluations, and the valuations used for land and specialised assets.

The above conclusions reflect the fact that we are committed to delivering a good quality airport, and we value highly the views of our customers in how to do that.

4 Removing technical disagreements and misunderstandings, the material disagreement comes down to the level of return we are targeting over the long run. This is an area, unfortunately, where agreement is difficult to reach with our customers. The incentives are simply too divergent on this topic.

5 However the existence of disagreement does not mean that our long run target level of return is inappropriate, nor that the truth lies somewhere in the middle. CIAL is the party with the first-hand experience of the risks involved in the ITP investment, and the demands of shareholders and capital markets. This is particularly important given the primary point of

difference on WACC is how to respond to the fact that the WACC IM does not reflect the demands of capital markets post-GFC.

6 In debates over airport returns it is common to hear the argument that airports have an incentive to overstate required returns. However airlines and the Commission do not have first-hand exposure to the demands airports face from capital markets. Nor is it credible to say that airports are free from competitive constraints, as discussed in our 22 March 2013 submission. The more nuanced picture is one of airports performing a unique role in the sector of delivering a quality airport service, promoting competition between airlines, and contributing to regional growth, while satisfying the demands of capital markets and shareholders for a return on investments made.

Weighted Average Cost of Capital (WACC)

7 The submissions from our customers, relying largely on the Futures Consultants Ltd (Futures) reports, reiterate the argument that the CAPM formula means that the cost of equity must move exactly in line with the risk free rate. This is an inaccurate statement of the CAPM and the state of play in finance theory. The implication of the argument made in the submissions is that the market risk premium must remain constant over time, irrespective of the state of the economy. However, there is nothing in the CAPM that requires this – indeed the more recent advances in the finance field suggest that parameters are likely to vary over time with the state of the economy. Such conditional CAPM produces a better fit with the real world data.

8 There is intuitive justification for a negative relationship between the risk free rate of return and the market risk premium:

- the market risk premium is compensation for bearing equity risk;
- equity risk tends to be greatest in depressed economic conditions; and
- the risk free rate also tends to be lowest in depressed economic conditions.

9 The corollary of this is that a reduction in the risk free rate need not imply a fall in the cost of equity, but rather may coincide with an increase in the cost of equity. In our previous submission, we presented market evidence that supported this view.

10 The challenge for CIAL has been to estimate its cost of equity at a time when government interest rates are at extremely low levels compared to history. The essence of CIAL's proposal is that (in effect) the better assumption – at least in the presence of such a substantial and unusual movement in the risk free rate – is that it is the total market expected return that remains approximately constant over time, so that changes in the risk free rate of return have little impact on the cost of equity.[1] The report from Mr Balchin attached to our submission provided substantial support for this view, which included:

- a standard practice amongst the UK regulators – supported by substantial advice from finance experts – for smoothing the estimated cost of equity estimate over time;

[1] In principle, a more enduring assumption would be that the total market return in real terms remains constant over time, which is the principle targeted by the UK regulators. However, between the month of August 2008 and the month of March 2013 the yield on 10 year nominal bonds fell by 2.41 percentage points, whereas the yield on inflation indexed bonds (albeit for a shorter term) fell by approximately the same amount (as only 2016 bonds were on issue in 2008 a direct comparison is not possible), suggesting that changes in inflationary expectations over this period were not material.

- the standard outcome of US regulators – who generally use the more market-reflective dividend growth model rather than the CAPM to set allowed costs of equity – of smooth cost of equity allowances over time, notwithstanding material changes in government interest rates; and

- an almost universal response by independent valuation experts in Australia to raise the cost of equity estimate above that provided by a standard application of the CAPM (i.e., with a static market risk premium reflective of historical information), either by adjusting upwards the risk free rate to reflect a more normal value (the method that CIAL has adopted), adjusting upwards the market risk premium or applying an adjustment based upon judgement (reflecting, amongst other things, the outcomes of other methods for estimating the cost of equity, such as the dividend growth model).

11 As explained previously, our objective was to derive a risk free rate of return for the calculation of the cost of equity that was representative of normal market conditions. Our approach was to use an average of the period that spanned the period before the Global Financial Crisis, the crisis itself and its aftermath. Given the objective of targeting a "normal market" risk free rate, CIAL would have been justified in relying only on data prior to the commencement of the Global Financial Crisis, which would have resulted in a higher risk free rate.

12 Futures comments correctly that CIAL's method of adjusting for the very low risk free rate may cause erroneous predictions of the cost of capital for assets with a very low risk. However, CIAL's adjustment was proposed as a simple and practical approach (and one that had the support of the eminent Australian finance academic, Professor Officer). A possibly more correct method of adjustment would have been to apply the CAPM by holding the market return value constant at its "normal market" level and then using the prevailing risk free rate in both instances of the CAPM (i.e., as implying a lower risk free rate and but higher market risk premium).

13 The impact of using this alternative approach to account for the current abnormally low risk free rate is shown below, both for the case of CIAL (with an equity beta of 0.95) and for a very low risk asset (showing the results for Futures' suggestion of an equity beta of 0.01). It can be observed that the difference in the estimated cost of equity between the two methods of adjustment is immaterial for CIAL, but much more material for an almost riskless asset.

Scenario for the cost of equity	**Cost of equity estimate**	
	CIAL **Equity beta = 0.95**	**Almost riskless asset** **Equity beta = 0.01**
TAMRP and risk free rate at normal market level	11.41%	4.40%
Market return at normal market level, spot risk free rate	11.34%	2.97%

Assumptions: Normal market TAMRP = 7.5%, normal market risk free rate = 6%, normal market return = 11.82%, spot risk free rate = 4%. Note that under the Brennan-Lally CAPM, the cost of equity for a risk free asset will be 2.88% (i.e., below the risk free rate of 4%), reflecting the assumed tax advantages of equity.

14 In the same vein, Air New Zealand has compared CIAL's estimate of the WACC for the forthcoming pricing period with the WACC that was determined in early 2009, and questioned the basis for the changes. It refers to CIAL's WACC estimate last time at 8.62 per cent (and a cost of equity estimate of 10.2 per cent) and contrasts this with its current proposal.

The following table sets out CIAL's WACC for the PSE1 reset (both its initial and final proposal) with its current estimate for PSE2, and also sets out BARNZ's view on this matter.

	Current	CIAL 2/2009	CIAL 12/2008	BARNZ 1/2009
Risk free rate	6.00%	4.44%	5.55%	5.55%
Asset beta	0.70	0.65	0.65	0.55
Equity beta	0.95	0.93	0.93	0.79
TAMRP	7.50%	7.50%	7.50%	7.00%
Average corporate tax rate	28%	30%	30%	30%
Average investor tax rate	28%	28%	28%	28%
Leverage	26%	30%	30%	30%
Cost of equity	*11.41%*	*10.20%*	*11.00%*	*9.50%*
Risk free rate – debt	4.31%	4.44%	5.55%	5.55%
Debt risk premium (incl. issuance)	2.70%	2.72%	2.10%	2.10%
Cost of debt (incl. issuance)	*7.01%*	*7.20%*	*7.70%*	*7.70%*
Appropriate post tax WACC for pricing	**9.76%**	**8.62%**	**9.28%**	**9.26%**

Note: BARNZ's midpoint WACC estimate was 8.25%, but it used 75th percentile figure (9.26%) to compensate for the possibility of underestimation of the WACC. Figures may not calculate precisely due to rounding.

15 From the table above, it is clear that, again, the factor that accounted for largest change to the estimated cost of equity was the treatment of the risk free rate when estimating the cost of equity. Appropriately, the estimated cost of debt has declined.

16 During the last review, CIAL was setting its prices during the period that we now know was shortly into the Global Financial Crisis. At the time, the yields on 10 year New Zealand Government bonds had fallen substantially, but there had up until then been little debate as to what this should mean for the cost of equity. Notwithstanding CIAL's concerns that a mechanistic application of the CAPM would have derived a *fall* in the estimated cost of equity during a period when it was more likely that the cost of equity had risen, it applied the model in the manner in which it had consulted earlier with the airlines. As a consequence, CIAL reduced its final WACC to 8.62 per cent.

17 During the intervening years, however, substantial additional analysis and debate on this issue has occurred and CIAL has revised its approach accordingly. This has been described in our earlier submissions. We noted, however, that if the comparison were drawn instead between the WACC that CIAL has used in its current pricing and the WACC of 9.28 per cent that predated the worst of the GFC and that was accepted at the time as reasonable by the airlines, then the difference is not material.

18 The other change that has occurred to CIAL's WACC is an increase in its estimate of systematic risk, via an increase in its estimated asset beta. The WACC used to derive CIAL's charges last time assumed that CIAL had risk that was the same as that of an average New Zealand (major) airport. The asset beta this time recognises that CIAL is likely to bear greater risk than the average New Zealand (major) airport, which is amply demonstrated by the recent events surrounding CIAL. It is also noted that the airlines accept an uplift of 0.05 to the asset beta for CIAL (albeit from a base of 0.60, implying an asset beta of 0.65).

Tax

19 The airlines' submissions again raise the question of tax allowance. We have anticipated this issue and have addressed it in detail in our Process and Issues Paper submission on 22 March 2013.

20 We would like to emphasise again the simple point we have made previously: the implied tax expense for PSE2 calculated in the long-term pricing model does not in any way attempt to replicate the actual tax payable during PSE2. For pricing purposes in the long-term pricing model, the only relevant variable is the present value of the implied tax allowances over the life of the assets. There would indeed be a valid concern if our approach were to produce a higher present value of tax allowances than the detailed build-up of tax payable. The model provided with our previous submission shows that is not the case.

21 The submissions from our customers make the specific point that we have overstated the PSE2 tax allowance by not excluding revaluations income from the calculation of tax payable. It is correct that the implied tax expense for PSE2 does not adjust for revaluations. However, it is irrelevant, since the effect of revaluations comes through the long-term tax expense calculation, and then feeds into the present value of the tax allowance. In other words, the present value of the tax allowance, which is relevant for pricing, effectively excludes tax on non-taxable revaluation income.

22 The tax model included with our previous submission clearly demonstrates this and is our best estimate of tax payable based on the cost base of assets included in the Pricing RAB. The tax payable calculation set out in that model excludes any tax on revaluations. As the tax model shows, the lack of explicit adjustment for revaluations in the implied tax expense for PSE2 does not lead to an over-statement of the present value of tax allowances.

23 Our customers' submissions also mention that we did not fully account for the changes to the deductibility of building depreciation. Of course, non-deductibility would lead to a higher tax allowance. We accept that our long-term implied tax expense approach is a simplification, and probably could have been adjusted for such non-deductibility. However, we felt that a simple approach of using pre-tax WACC avoided a multitude of tax complications.

24 Again, our tax payable calculation is based on the actual forecast tax deductible depreciation, and hence specifically excludes any tax depreciation allowance on buildings following the 2010 Budget decision, i.e. it takes this non-deductibility into account. The key conclusion remains: our approach provides a reasonable estimate of the present value of future tax allowances.

Pricing Structure

25 The submissions from our customers express concern about the introduction of the fixed landing charge as part of the airfield pricing. The submissions mischaracterise this charge as being directed at over-recovery and express concern that it creates cross-subsidisation between jet and turbo-prop aircraft.

26 The claim that the fixed charge is directed at over-recovery is simply wrong. Our approach—as shown in the financial model provided to airlines during the pricing consultation—is to determine the revenue path for the airfield using the long-run model. The revenue path is derived by reference to the revenue that would have been raised at constant levelised real prices. We then subtract the fixed charge revenue from the long-run revenue path, and calculate the variable MCTOW charges to achieve the residual revenue. The allocation of the

variable revenue to Turboprop versus Jet aircraft was based on the revenue outcome that was experienced by CIAL over the 2001-2012 period – a basis that was formulated in the 2000 price reset based on the comprehensive weight/aircraft type configuration methodology developed for that price reset.

27 The very purpose for the introduction of the fixed charge was to address concerns about cross-subsidisation. Without fixed charges, it was determined that jet aircraft paid more than the efficient share of the airfield costs. This was because MCTOW-only charges do not recognise the fixed costs associated with any aircraft, regardless of its size. The fixed charges corrects the obvious cross-subsidisation problem, but we are conscious that it is extremely difficult to come up with the optimal cost allocation between different types of aircraft, which would then lead to the airfield pricing structure that would be completely defensible against any risk of cross-subsidisation.

28 During the pricing consultations, we supplied our customers with engineering and economic analyses which showed the range of economically efficient cost allocations, and hence a reasonable range of charges that result from the sharing of the airfield costs between different kinds of aircraft. We believe our charges fall within such range, but we recognise that some of our customers may prefer one or the other end of that range.

29 The advice provided to the airlines supporting this position is included as appendix 7 to this submission.

PSE1

30 Submissions from BARNZ and Air New Zealand argue that the outcomes for PSE1 need to be adjusted to reflect prior unanticipated revaluation gains. This issue was traversed during the input methodologies process, and the argument rejected as an ex post reallocation of risk. The same answer applies here. With respect to the opening asset base for PSE1, we simply applied the input methodologies as determined by the Commission.

31 To understand the outcome of PSE1, we analyse it using the same IRR model that the Commission has developed for understanding PSE2. The model shows that the outcome of PSE1 was within a reasonable range of returns.

32 The submission from BARNZ appears to imply that CIAL over-recovered during PSE1 and that the outcome of PSE1 is part of a pattern of conduct. The assertion in the submission is not backed by any evidence. While the IRR model requires careful interpretation—we discussed the relevant issues in our previous submission—it at least provides some factual basis. The facts do not support the claim that CIAL over-recovered its costs during PSE1. In fact, our pricing in PSE1 and PSE2 shows a pattern of responding to market conditions and competitive constraints.

PSE3

33 Submissions from BARNZ and Air New Zealand attempt to make something of the fact that we don't make commitments now as to the pricing parameters we will use in 2017 to set our PSE3 prices. The suggestion is that this evidences game playing or a duplicity of purpose on our part.

34 This is disappointing, because the answer is a simple one and is well known to our customers. The legal position is that we must approach the consultation in 2017 with an open mind, and cannot make hard commitments now. There is no more or less to the point than that.

35 In fact, as we discussed with our customers during the PSE2 consultations, the limitations of the Airport Authorities Act create uncertainty for both airports and the airlines. Given CIAL's long-term approach to pricing—which involves under-recovery in PSE2—CIAL is at significant risk that the airlines and other external authorities will not take that historical under-recovery into account during future price consultations. As we mentioned in our previous submission, any future attempts to switch back to short-term pricing which just recovers the cost of service attributed to arbitrary future periods will result in permanent loss to CIAL and will ensure that NPV is less than 0.

36 Recognising this vulnerability, we raised during the consultations the possibility of developing some mutual medium-term commitments between the airlines and CIAL—even if such commitments could not be made enforceable due to the consultation requirements. We suggested the concept of a Deferred Value Account (DVA) as the tool for under-pinning medium term pricing stability. This concept was rejected by our customers.

37 A related argument made by airlines is that CIAL is an advocate of MVEU and may jump to a MVEU asset valuation approach in 2017. We **do not** intend to do that. As the Commission will be aware, CIAL did not advocate for MVEU during the development of the input methodologies, and in the merits review we have argued for the MVAU methodology to include the investment made by airports in conversion. The difference of opinion with the Commission is not over whether investors should be able to recover conversion costs, but the Commission's claim that they can be assumed to be fully depreciated. This is not advocacy for MVEU.

38 We have emphasised our commitment to a long term pricing model, which is based on the asset valuation input methodology. About our long term approach, we said:

> *To follow this logic, what CIAL can do – and is doing – is be very transparent now about the basis for this pricing period and the medium term view it is taking. If in 5 years' time CIAL were to act inconsistently, it will be very obvious to the airlines and the Commerce Commission.*

39 In short, we have used the consultation process and information disclosure regime to make the strongest practical commitment the legal framework allows. We have indicated that we do not expect significant real price adjustments once we reach our stable long-term price. However, we are also conscious that even within the long-term pricing framework, a review of prices will be necessary to reflect updated demand volumes, new capital investment and actual costs—including the cost of capital—at the time of the next consultations.

40 Finally, we wish to correct BARNZ's statement that we started the price consultation with an MVEU land valuation. The correct statement is that we started with a 2009 MVAU land valuation, with values initially indexed up to the beginning of the pricing period based on actual MVAU revaluations (as applied through the financial statements). As a consequence of the consultation process we subsequently changed the revaluation basis for the 2010-2011 period to be an indexation basis at CPI, with a revaluation to MVAU in 2012.

Impact of Information Disclosure

41 Air New Zealand makes repeated comments that information disclosure has not had any impact on performance or the consultation process. This seems to be a reflexive response rather than one which is grounded in the evidence. The countervailing power of our customers and competitive market pressures created strong incentives on us to share

information and to aim for agreement with our customers even before the ID regime. However, ID has had a further effect on the engagement between CIAL and its customers. In fact, as Air New Zealand recognise elsewhere in the submission, ID has had a clear impact – CIAL adopted an asset valuation consistent with the input methodologies, and this meant that an issue which has historically been contentious was not a significant part of the consultation process. It is difficult to see how Air New Zealand can seriously claim information disclosure (including the input methodologies) has not had an impact on CIAL's performance or the consultation.

42 In our 22 March 2013 submission, we identified other impacts that information disclosure has had on CIAL's performance and the consultation process.

Other More Minor Disagreements

43 Below we address some further minor disagreements. More detailed comments in support of these points are outlined in the appendices attached.

Demand forecast for domestic jet

44 Concern was raised about CIAL's domestic Jet demand forecast and how it had inadequately (in the airlines opinion) not taken account of Air NZ's domestic fleet reconfiguration or the level of growth forecast by Jetstar. In considering this position it is necessary to consider all aircraft movements. CIAL considers that insufficient account of aircraft substitution, particularly domestic turboprop and domestic jet movements, was made by the airlines. A more comprehensive outline of this item is included as Appendix 1.

Allocation of terminal space

45 BARNZ expressed a concern that the allocation of horizontal circulation space was different to that applied to toilets, plant and vertical circulation space, contending that it was illogical and unsupportable. This does not have any foundation in CIAL's opinion and a more detailed explanation of the response provided to the airlines on this point is included in Appendix 2.

Major Pavement maintenance

46 Jetstar submitted a concern on one aspect of the capital investment forecast, expressing an opinion that the pavement maintenance of approximately $30 million over the price reset period is more than three times more expensive than other airports of similar size. CIAL incorporated this forecast of investment based on independent expert advice and believes that the forecast has a strong foundation, and is appropriate to be included in the pricing reset for PSE2. Refer to Appendix 3 for more detail on this item.

DEMAND FORECAST

During the pricing consultation, CIAL received the following concerns:

- That CIAL did not take account of the progressive fleet reconfiguration to be carried out by Air New Zealand - replacing the present Boeing 737 aircraft with Airbus A320 aircraft and the addition of new ATR 600 aircraft (replacing the existing ATR aircraft); and

- In addition, Jetstar also made the comment that CIAL had been conservative and had not taken account of their forecast growth particularly in the international sector which they perceive will grow at approximately 11% over the period.

CIAL made specific changes to the forecast incorporating these factors and updated the 2012 demand forecast for domestic and international passenger movements. This updated demand forecast was used in the final model supporting the pricing decision.

BARNZ and Jetstar continue to contend in submissions that CIAL has inadequately taken consideration of these points.

CIAL does not accept these contentions and provides the following analysis in support of this position.

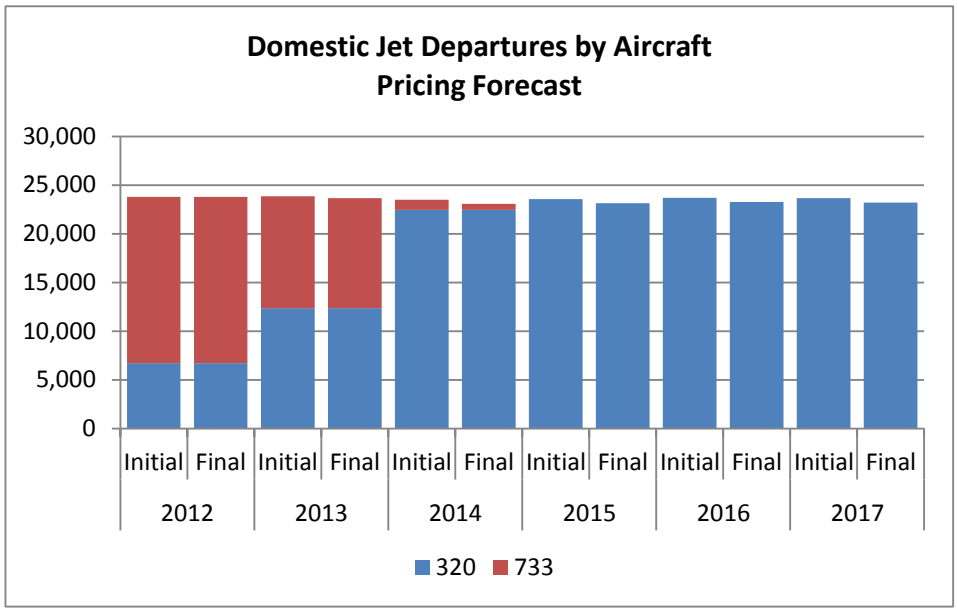
Air New Zealand Fleet Reconfiguration

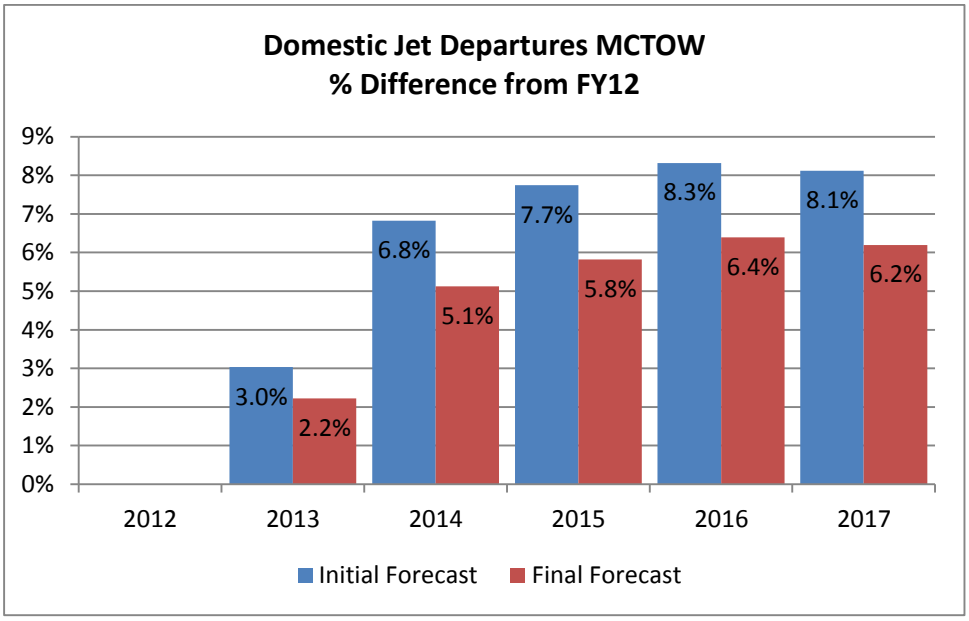
- ***Domestic market - A320 replacing B737 Aircraft***

CIAL, in developing its final demand forecast, took account of the Air NZ A320/Boeing737 reconfiguration. The final demand forecast has in fact allowed for an earlier reconfiguration of these aircraft than that advised by Air New Zealand.

CIAL assumed that the last aircraft change would be by the end of CY 2013, with all jet movements in the domestic market from then onwards would be serviced by the Airbus A320 aircraft. Air NZ advised that the last aircraft change would be 2016. The impact of this reconfiguration is that the A320 is a bigger aircraft, containing 171 seats/77 Tonnes compared with the Boeing 737 aircraft with 136 seats/63 tonnes. The actual fleet configuration from 2015 onwards assumes all A320 aircraft with the higher seat capacity.

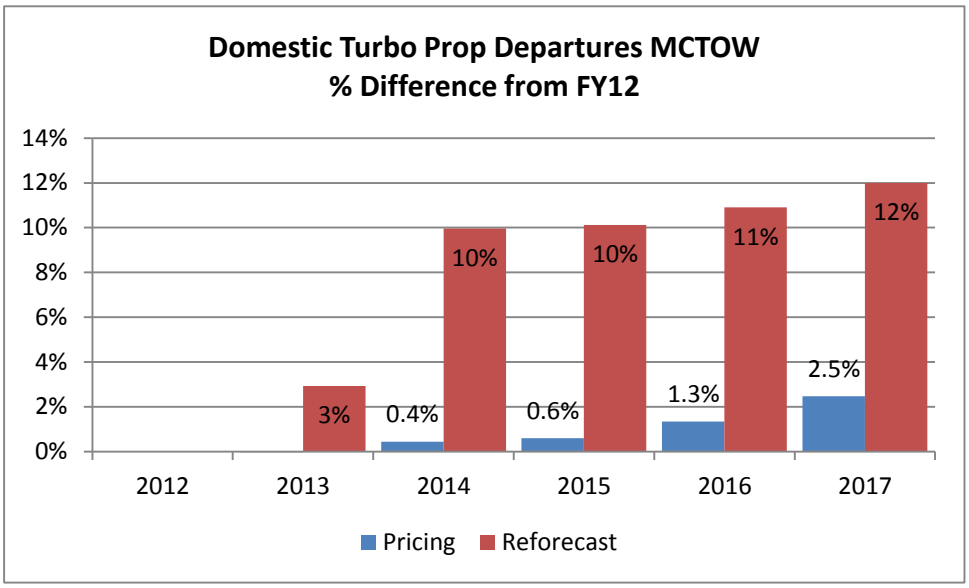
The following charts illustrate the aircraft mix profile and the impact of the change in MCTOW as a consequence of this change.





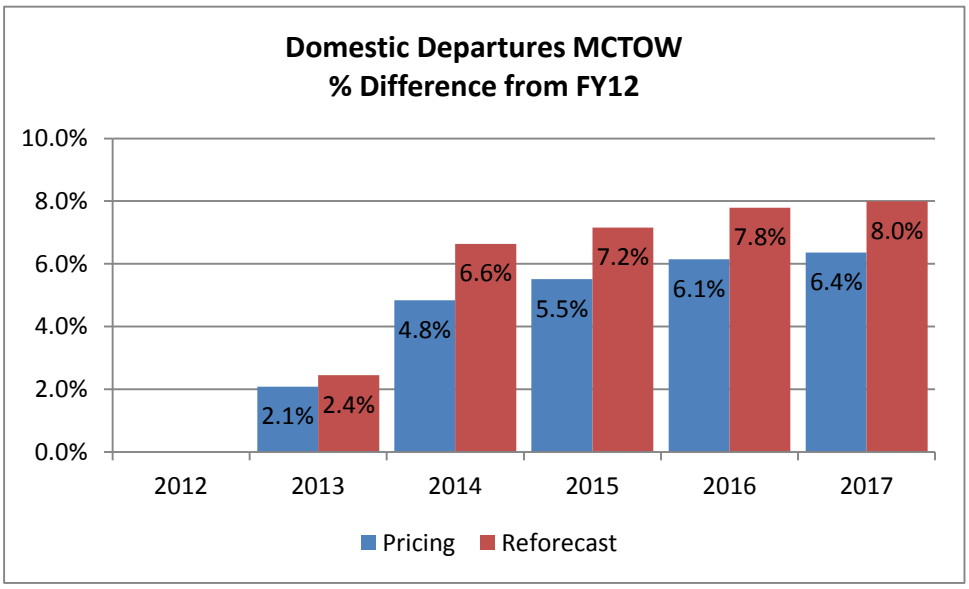
It is noted the increment in MCTOW is less than that outlined by Air NZ as they have derived the potential increase from a B737 to A320 aircraft from 57 tonnes to 71 tonnes, whereas CIAL has been using a weight allowance of 63.3 tonnes as the basis for forecasting and pricing.

However, we do not consider that the airlines have taken sufficient consideration of the substitution of aircraft operating the routes flying to and from Christchurch Airport. Air New Zealand has had a robust programme of re-gauging aircraft and substituting the Boeing/Airbus jet aircraft with ATR Turboprop aircraft. The following chart demonstrates this position and shows the impact on turboprop aircraft MCTOW profile, reflecting the substitution programme progressed.



Accordingly, the demand forecast was based on the proposed mix of jet aircraft servicing main trunk routes and turboprop aircraft servicing the main regional routes (these are the predominant aircraft used on these routes) and for routes such as Wellington where a number of services have been transferred to ATR aircraft rather than the previous jet aircraft.

The following chart illustrates how the final demand forecast has taken account of the overall fleet reconfiguration.



- ***International Demand***

With respect to Jetstar's position on their own particular growth profile, CIAL has needed to consider the market growth overall. While certain airlines may consider that they will grow their particular market share, and Jetstar has certainly increased the seating capacity on main trunk routes in 2013, this does not necessarily translate to an overall growth in the total market. Rather, it may result in a rationalisation of the market share of the two incumbent carriers. CIAL's research indicates that the overall market will not grow at the levels forecast individually by the airlines. As a consequence, our view simply put is that if one airline grows then the market share of the alternate carrier will diminish.

CIAL has provided in the submission to the Process and Issues paper on 22 March a table on page 56 that identified the actual demand for international and domestic passengers for the periods 2009-2012 and shows the first two years forecast in the pricing reset for 2013 and 2014. This identifies that the forecast for the domestic market for 2013 and 2014 was a 2% accumulative growth each year and for the international market a 3.2% growth in 2013 followed by 7.5% growth uplift - as a consequence of the forecast growth to arise as a result of the Christchurch redevelopment programme.

Comparison							
Pricing					*Growth trend*		
2009	4,333,294	1,574,783	5,908,077	actual			
2010	4,377,773	1,622,641	6,000,414	actual	1.0%	3.0%	1.6%
2011	4,287,338	1,488,362	5,775,700	actual	-2.1%	-8.3%	-3.7%
2012	4,032,718	1,312,948	5,345,666	Pricing Forecast	-5.9%	-11.8%	-7.4%
2013	4,113,372	1,355,561	5,468,933	Pricing Forecast	***2.0%***	***3.2%***	***2.3%***
2014	4,195,640	1,457,228	5,652,867	Pricing Forecast	***2.0%***	***7.5%***	***3.4%***
Updated outlook							
2013	4,065,629	1,328,095	5,393,724	Updated Forecast	***0.8%***	***1.2%***	***0.9%***

In considering the 2013 performance to date against that included in the price forecast, the projected outlook for FY2013 now identifies that growth of only 0.8% (compared to 2%) for the domestic market and only 1.2% (compared to 3.2%) for international passengers is expected to occur in 2013. Demand is therefore already softer than forecast.

CIAL advised airline customers that the 2013 and 2014 period represented a considerable period of uncertainty as the programme for the redevelopment of Christchurch has fallen behind that originally anticipated when the demand forecast for the pricing reset was established. Even now there is still some considerable uncertainty as to when this redevelopment programme will create a catalyst for growth particularly in the international market. This growth is particularly predicated around the availability of accommodation to service tourism traffic and we note that prior to the earthquakes there were 38 hotels available in Christchurch and currently there are only 15 hotels presently in operation. Hotel redevelopment is reliant on the redevelopment programme but also in terms of when the growth in passenger volumes is likely to occur. Unfortunately this is a catch 22 consideration in that hotel accommodation may not be built until the passenger growth occurs and conversely passengers may not come to Christchurch unless there is appropriate hotel accommodation. This increases the uncertainty and the likely timing for the resurgence of growth to that anticipated.

Accordingly, the international demand forecast included in the pricing reset now appears to be on the optimistic side. This is particularly influenced by the reduction of capacity on the Trans-Tasman which is having a significant impact on international travel to the South Island from Australia through Christchurch. This passenger travel is further influenced through an increase in point to point travel to destinations such as Queenstown, providing further uncertainty on the forecast demand in future periods.

COST ALLOCATION

BARNZ made a comment that the allocation of horizontal circulation space (corridors walkways and public circulation) was different to the approach applied to the allocation of toilets plant and vertical circulation space (allocated on a prorate basis between aeronautical and commercial activity).

CIAL considers that the allocation was appropriate and has a logical foundation. A summary of the response provided to the airlines on this point is repeated below for information.

EXTRACT - Response to Queries from Airlines – Allocation of Footprint

1. Asset Allocation

1.1. Why is CIAL treating horizontal circulation space (i.e. corridors) differently than vertical circulation space (i.e. lifts and stairs)?

RESPONSE 1.1

Treatment of horizontal circulation separately from vertical circulation.

Vertical circulation includes areas for toilets, plant, and lifts and stairs. This is referred to as TPV (toilets, plant, and vertical circulation). The process applied to the allocation of TPV involves the following steps:

Step 1 – Total sq m of TPV (10,254.74 sq m) is allocated to the functional areas on the same proportion as the total sq m of those function areas; e.g. domestic reclaim is 1.45% of the total sq m of the terminal, and therefore 1.45% of the TPV area is allocated to domestic reclaim.

Step 2 – Each of the function areas is then allocated between pricing and non-pricing on the same proportion as the total sq m allocations between pricing and non-pricing. e.g. retail has 0% allocated to pricing

The result is 60.7% allocated to pricing, being 6,220.13 sq m.

It is considered that TPV is necessary for servicing all functions of the airport in a general way – and therefore it is appropriate to pro-rate the total across all functions.

Horizontal corridors are considered to service the specific function where they are located. In addition, adjustments are necessary for retail curtilage that forms part of the corridors. The remaining area of corridors is allocated to pricing based on the specific function e.g. corridors supporting baggage reclaim are allocated 100% to pricing; corridors which service retail functions are allocated 100% to commercial.

Corridors which support shared functions are allocated on the basis of 60% aeronautical and 40% commercial, being an approximation of the allocation of the total area of the terminal.

AIRFIELD PAVEMENT MAINTENANCE

In their submission on the capital investment forecast, Jetstar expressed an opinion that the pavement maintenance of approximately $30 million over the price reset period is more than three times more expensive than other airports of similar size.

Airline customers were advised in the Pricing Consultation process that the forecast programme for our major maintenance programme has been developed under a long term asset management plan prepared for CIAL by consulting engineers Beca (our expert advisers for airfield and pavement maintenance). This forecast programme included in the price reset is consistent with the long term asset management plan. The actual programme of work is assessed every year before the planned work is undertaken (through a condition based assessment of the programmed elements of work) to ensure that the work is actually required. Based on the actual conditions assessed the programme may be modified (should the review identify areas which may not require the remediation as forecast) or conversely the addition of other areas (that may require work where previously this was not anticipated until some future point in time).

CIAL provides an independent commentary from our present airfield consulting engineer experts AECOM. They advise, detailed below, that it is very difficult to compare one airport with another in terms of the relative spends. This is due to the fact that each airport has specific conditions relating to the nature of the airport which include:

- The present condition of the pavement as assessed.
- The relative number of movements and the types of aircraft that operate at the particular airport.
- The nature and form of the substrata that underpins the airfield.
- The climatic conditions being experienced by the respective airports e.g. whether they are exposed to snow, frost and the like.

AECOM advise that such a comparison between airports is not practical and that any programme of work should consider the specific nature of the airport concerned.

The current pavement maintenance programme, based on independent expert advice as to the likely programme and timing of work required, estimates that the likely cost of major pavement maintenance for Christchurch Airport – with a major runway and a secondary crosswind runway – is an estimated cost for the 20 year period of approximately $105 million.

We confirm again that the forecast as included in the pricing proposal were the best estimates as provided by our consulting engineers and that actual expenditure will only be carried out following a physical condition based monitoring examination every year to ensure that the actual work is only for areas that require the necessary remedial action.

AECOM Advice

1. General commentary on why you cannot compare one airport with another, outlining the factors that cause this.

It is not possible to directly compare the costs associated with maintenance and rehabilitation strategies for different airports. The raw costs would need to be normalised in a number of areas so that they could be compared on a like for like basis. From past experience in the Australian Federal Airports Corporation (FAC) which was responsible for maintenance across all Australian capital city airports this proved very difficult to achieve (The Federal Airports Corporation (FAC) was a business enterprise of the Government of Australia responsible for the operation of major passenger airports in Australia. At the beginning of 1997 the corporation operated 22 airports and handled over 60 million passengers annually).

The key areas where meaningful differences arise are summarised below.

a) ***Extent of Aircraft Pavements*** **-** The area of pavements under management has a direct and obvious impact on the cost of maintenance strategies. Larger airports cater for higher peak demands and have a number of apron gates and taxiways for parking and moving aircraft around the airfield, these pavements all require maintenance, cyclic resurfacings and life cycle strength upgrading as newer aircraft trend to heavier wheel loadings.

b) ***The number of runways under management*** **-** The performance standards associated with runways (as well as the consequences of failure) generally result in a higher unit rate for maintenance and rehabilitation than other areas (taxiways, aprons). For example rubber removal, repainting centre line marking result in higher maintenance costs. Frequency of runway resurfacing is usually more frequent than taxiways/aprons.

c) ***The relative proportion of concrete pavement and asphalt surface pavement*** - Will have a significant impact on the annual average capital expenditure required for rehabilitation of the pavements. For example an airfield with 70% asphalt surface pavements will have a higher average annual rehabilitation cost than an airport of the same size that has only 30% of asphalt surfaced pavements. Asphalt surfaced pavements are typically resurfaced every 10 to 15 years depending upon location and use. Longer life can be achieved by use of surface treatments. By comparison, concrete pavements generally have a fairly low average annual maintenance cost. Although it should be noted that the cost of the end of life treatment of concrete pavements can be very high and difficult to implement on an active airfield, this is often overlooked when considering annual maintenance expenditure. How this end of life cost is treated within the overall cost of the rehabilitation strategy can also result in significant cost variations.

d) ***Legacy Pavement Issues*** **-** Most airports have been progressively developed over many years as pavement engineering construction standards and testing have been progressively improved. As a result some older airports now have areas of pavement that contain materials or pavement structures that are built to a lower standard. There areas typically perform poorly and the airports rehabilitation strategy needs to address how these areas are best treated to limit risk of damage to an aircraft or risk of significant operational disruption due to pavement failure. These legacy issues will vary widely between airports and can have a significant impact on the cost of the rehabilitation strategy for the airport.

    a. Legacy pavement issues can also extend to issues such as inappropriate pavement type selection. For example there are some major airports in Australia where taxiways were constructed as asphalt surfaced flexible pavements. This would have been appropriate at the time, however over time some of these taxiways have become very heavily

loaded departure taxiways. If they were designed today they would most likely be designed as a rigid concrete pavement or as a significantly higher standard flexible pavement. Similar examples are found at Runway ends and apron areas. In these circumstances a higher cost maintenance and rehabilitation strategy usually results.

b. Auckland has been through the major main runway reconstruction in the mid 1990's through 2000, this was a significant capital cost to "renew" their concrete runway surfacing.

e) ***Airport Environment*** - The climate, in particular temperature and rainfall, can also have an impact. Excessive heat and rainfall can impact on the performance of asphalt surfaced pavements. Similarly the requirement to apply de-icing agents to aircraft pavements and snow ploughing can have a direct impact on the life span of the surfacing, especially asphaltic surfacings. Christchurch has both these activities to a much higher extents than most other airports in the region.

f) ***Aircraft Mix Using the Airport*** **-** The proportion of larger aircraft using the airport will also have an impact. Runway 01/19 at Brisbane Airport is currently the busiest runway in Australia (at a major capital city). However the "Tonnes Landed" at Brisbane is significantly lower than the main runways at Sydney. This is because the majority of aircraft using Brisbane are narrow body aircraft while the bias in the aircraft at Sydney is towards wide-body aircraft.

Christchurch carries a high number of both narrow body and wide body internationals, these are aircraft are significantly heavier (maximum fuel weights) than domestic jet operations.

2. Discrete requirements for Christchurch

The last four years of airfield maintenance at CIAL have been dealing with legacy runway pavement issues on the main 02-20 runway which has required deep mill out and replacement of old defective asphalt at depth beneath the current surfacing layer. This work was critical in keeping the runway in a safe operational condition, this year's program concluded the legacy defects repairs. The cross wind runway 11 – 29 has been widened and progressively strengthened to handle larger jet aircraft operations. 2013/14 will see the last stage of the strengthening of this cross wind runway. This work is a reflection of the heavier wheel loadings being experienced under the newer jet aircraft fleet now in operations into Christchurch Airport.

Similarly the apron pavements are at the end of their reliable service life and a progressive upgrading of the parking bays is being implemented, again the pavement profile is being strengthened to carry the higher wheels loads under the newer jet aircraft now in operation. Extensive maintenance patching and holding repairs have been required in the interim to allow the staged reconstruction of the apron facilities. The apron upgrading is on-going for at least another 5 years to address the international gates once the ITP is completed (which has focused on domestic turboprop and code C jet aprons on the airside). The new parking aprons include cemented bases and concrete block paving to reliably handle the wheel loadings, in the past thin asphaltic surfacings where used.

OPERATIONAL PERFORMANCE

The airlines through BARNZ advised that operational staff have noted that there were potential capacity constraints or areas which were close to capacity and these included:

- The check-in hall;
- Regional gates and apron;
- International arrivals baggage reclaim belts; and
- The interface between parking aprons and the taxiway where aircraft push back off gates.

Check-in hall

The check-in hall size was optimised to the capital cost for terminal investment, considering the required functional specifications to minimise the cost for airline customers. In developing the particular size of the check-in hall, we considered the changing nature of the check-in process and the facilitation of passenger flow being progressed by airlines and airports; particularly through the use of technology uptake and the use of mobility devices. It is believed, and was a deliberate position taken in formulating the functional design, that continuing technology update will offset growth in passenger volumes for several decades.

Regional Gates and Apron

It was also noted by BARNZ that the regional gates were already at capacity with regional operations having to flow over to the jet gates at times. This flow over was a deliberate intention and was designed for this purpose.

A further concern raised by the airlines was that seating capacity is also a premium at peak times. It is noted that this seating capacity was designed by Air New Zealand having consideration for its own projected requirements with no acknowledgement of any feedback from CIAL.

CIAL has identified a future growth path that can meet any capacity constraints. The solution will be to grow such requirements to the east where the present Hangar 4, presently leased from CIAL by Air New Zealand for its painting hangar, will be removed to enable the regional apron/aircraft parking space to be extended to meet growth requirements. As noted by BARNZ this is forecast to occur in Year 2 of PSE2 and CIAL does not envisage that any additional investment beyond that forecast will be required in PSE2.

International Arrival Baggage Reclaim Belts

The international arrivals baggage reclaim area is serviced by three small belts and one large belt to meet the range of aircraft servicing Christchurch Airport. CIAL is aware of this issue and can modify the physical configuration reasonably easy when the need is actually determined.

Push back of Aircraft

In considering this point CIAL advises that a feature of the new domestic jet apron is a new taxi lane specifically for this purpose. However, as this area has yet to be completed as part of the final stage of ITP the airline staff may not be aware of this functionality.

LAND HOLDING

BARNZ noted a supposed outstanding issue around the identification of land used to provide the regulated services.

In the 2009 price reset CIAL gave this item significant consideration when determining the appropriate area of land to be included in the airfield asset base on which prices will be determined. The distance from the runway used to define the area of land to be incorporated was based on the height of a modest sized hangar/warehouse requiring airfield frontage. Allowing land inside this setback to be developed for other uses would compromise CIAL's ability to provide this level of facility on an airport without further compromising aviation efficiency. Airports need to take account of all users as airlines are not the single party with a sole commercial interest.

There is also a need to provide flexibility for changes imposed by the regulator at short notice and an example of this has been the need RESA changes driven by the recent CAA requirement, for safety/security and other related factors. Such considerations, both in terms of the timing of when some of these aspects are required and also the physical configuration required are taken account of when decisions are made to invest in land on Christchurch Airport. This was compared to other means of attaining control of such land to ensure CIAL has the capability to manage and meet such needs. If such land is not required for the present service delivery then it is included as land held for future development. The RESA example detailed above involved a reconfiguration of access roads around the western edge of the airport - necessitating ownership of the land to ensure that the necessary reconfigurations were able to be carried out when required.

WACC

We note that many of the matters that were raised by the Futures September 2012 report were a repeat of matters that have already been addressed in our previous submissions. In addition, the September 2012 Futures report has emphasised two matters that we have not addressed directly previously:

- Updating of the WACC estimates
- The source of data for the debt risk premium.

Updating estimates

In its latest advice, Futures updated its estimates of the WACC to take account of the changes in interest rates (risk free and debt premium) between the averaging period employed for CIAL (the month of March 2012) and the months of June and August. During this period, there was a further fall in the risk free rate (part of which was passed on to the estimated cost of debt).

CIAL submits that it is inappropriate to judge its proposal after taking account of the further changes in interest rates since CIAL's figures were "locked in". The averaging period that was adopted for CIAL's proposal was the latest practically available for which the Commission's estimates of the debt risk premium for different credit bands was available, with this link to the Commission's estimates a response to Futures' earlier arguments. Accordingly, the appropriate comparison of positions for the Commission's review is the positions as set out in Mr Balchin's March 2013 report.

Source of data for the debt risk premium

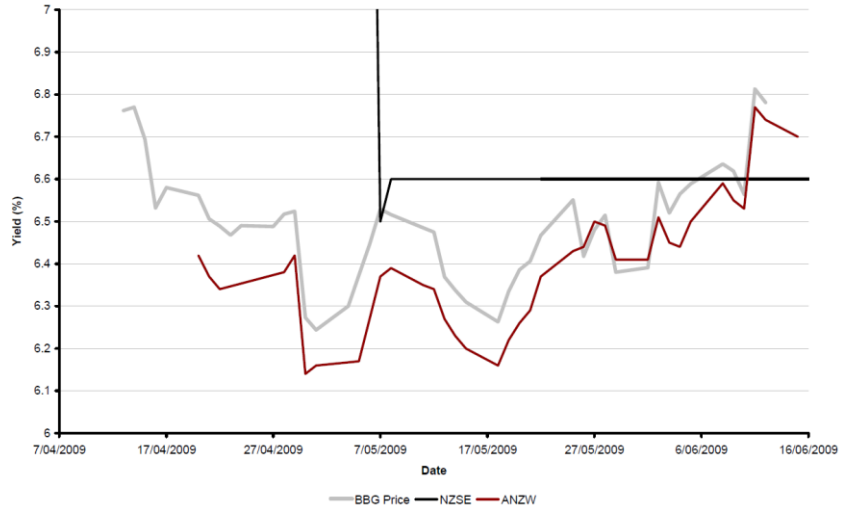
In relation to the derivation of the debt risk premium, Futures advocates using the yields for retail corporate bonds that are published by the New Zealand Stock Exchange (NZX) in preference to the yields that are available from Bloomberg. The different source of information appeared to reduce Futures' estimate of the appropriate debt risk premium by approximately 30 basis points (this is the difference between the Commission's and Futures' observed debt risk premium for 5 year Auckland airport bonds over the month of August). Both the Commission and Mr Balchin in his advice to CIAL have preferred the latter source. Futures' reasons for preferring the NZX figures stem from a concern that the Bloomberg yields may be the subject of manipulation, and referred to the recent cases of manipulation by large financial institutions of the interbank lending rates in the UK and US as examples of this.

CIAL has previously received advice on the relative merits of the NZX and Bloomberg sources for information on the current yields on corporate bonds (from Mr Balchin in 2009, then of the Allen Consulting Group, responding to comments from Mr Layton, then of NZIER). The advice that CIAL received was that the NZX quoted yields reflected the last trade in the bonds, and that the pattern of yields over time suggested that there were very few trades in the bonds. As a consequence, it was advised there was a high likelihood that the NZX yields at any point in time were not reflective of the yield that would be implied by a current trade in the bond (i.e., "stale" information).

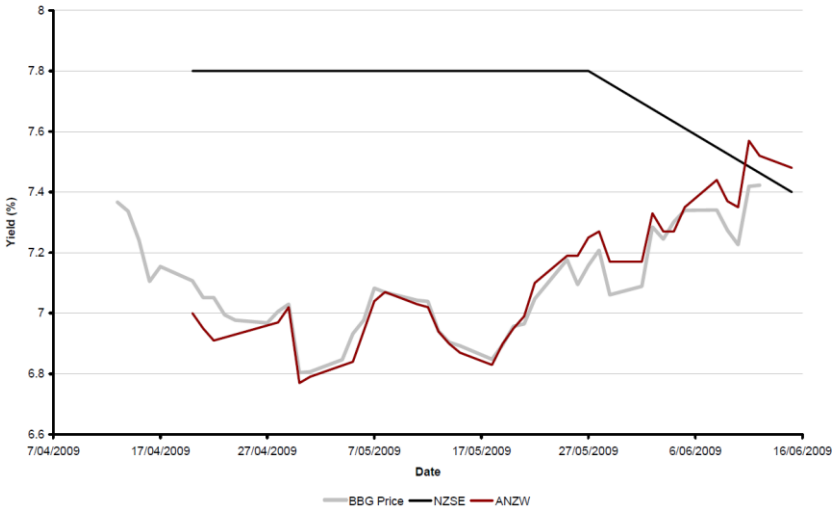
The charts below illustrate the behaviour of the NZX yields compared to the Bloomberg yields for four Auckland Airport bonds on issue at the time (the year denotes the year of maturity of the bond, and the information was current at the time the advice was provided in June 2009). The term "NZSE"

denotes the NZX yields, BBG the yields quoted from Bloomberg and ANZ are ANZ's daily opinions on the current yield on the bond (also obtained from Bloomberg).

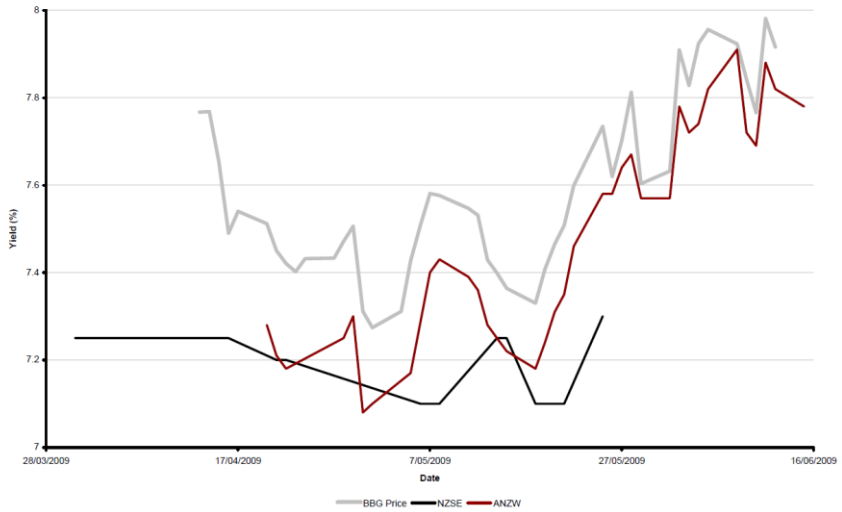
AIA 2012



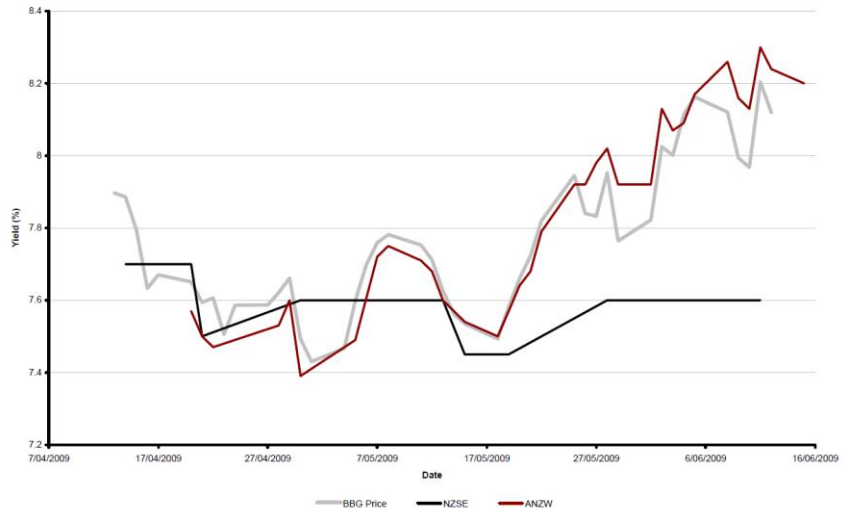
AIA 2014



AIA 2015



AIA 2016



As can be seen, the NZX yields are no obviously lower or higher than those provided by Bloomberg, just much less variable over time, supporting the view that a short term snap shot of these yields may yield materially incorrect information.

Turning to Futures' reasons for preferring the NZX data – namely the potential for distortion of the Bloomberg figures – it is noted that the interbank lending rates that are the subject of the recent scandals in the UK and US form the basis of substantial trading activity, thus providing strong financial gains (and incentive) from manipulation. This is unlikely to be the case for Bloomberg estimates of NZ corporate bond yields.

Allocation of Common Costs to Prices

Explanatory Note to the Spreadsheet

The allocation of common costs to multiple users or services is difficult when there is no obvious causal relationship between the incidence of costs and the services. Economic theory allows a wide range of "efficient" prices where common costs are to be recovered from multiple classes of users or services. This is because any price between incremental costs and standalone costs are efficient. In setting airfield charges, CIAL has sought to ensure that the resulting allocation of total costs between various classes of users is both efficient and commercially reasonable.

Incremental costs are the additional costs that are caused by a single class of user or service on a "with and without" basis. Standalone costs are the costs of providing the service only to one class of user or service.

The attached spreadsheet shows how the analysis of the incremental and standalone costs of both jet and turboprop aircraft on the airfield, including the land and the pavements and taxiways, was carried out for pricing purposes.

Step 1: Full cost analysis

To develop the incremental and standalone costs, we used the BECA estimate that an airfield configured solely for turboprop aircraft would have a cost of 33 per cent of the current configuration. This substantial reduction in cost is because a turboprop only airfield would have shorter and narrower runways with less pavement thickness as well as less taxiways and parking areas. This turboprop only airfield configuration would have a capacity equal to the current and future forecasts for turboprop movements.

Using the BECA data (together with the CIAL WACC and the straight-line depreciation assumption), we developed four hypothetical options:

- **Incremental Turboprop**—in this option we look at the additional costs that would be incurred by adding the existing volume of turboprop aircraft to an airfield configured to handle the existing volume of jet traffic
- **Standalone Turboprop**—in this option we look at the costs of an airfield configured only to handle the existing volume of turboprop traffic
- **Incremental Jet**—in this option we look at the additional costs that would be incurred by adding the existing volume of jet aircraft to an airfield configured to handle only the existing volume of turboprop traffic
- **Standalone Jet**—in this option we look at the costs of an airfield configured only to handle the existing volume of jet traffic

We allocated the indicative annual costs for 2013 to these four options as follows:

- The return of capital has been split into land and pavement components.
  - The return of capital on the land has been allocated in full to the standalone turboprop and jet options. There is no allocation of land costs to either of the incremental options as no additional land would be required for the incremental capacity
  - The return on capital on the pavement has been allocated in full to the standalone jet option as the entire existing pavement is required for jet traffic. Only 33 per cent of the pavement cost has been allocated to the standalone turboprop option—based on the BECA estimates that the capital cost of a turbo only airfield configuration is 33 per cent of the current configuration. No pavement costs have been allocated to the

incremental turbo option as no additional pavement is required. The incremental jet option has been allocated 67 percent of the cost of pavement—the additional pavement needed to convert the airfield from turboprop only to allow for current jet traffic

- Depreciation has been allocated to each option in proportion to the capital cost of the pavement for each option
- Operating costs have also been allocated to each option in proportion to the capital cost of pavement for each option. We assume a nominal $1.0 million in operating costs for the incremental turboprop option as there is no additional pavement required but it is likely that the increased number of movements will lead to some small additional operating costs.

Step 2: Unscaled Range of Charges

We divided the full indicative annual costs for each option by the expected movements and MCTOWs in 2013 to arrive at indicative standalone and incremental costs for both jet and turboprops.

We allocate the land related costs to the per movement charge, and the pavement related costs to the MCTOW charge. The logic behind this allocation is that the total land requirement is not influenced by the weight of the aircraft, but is likely to be influenced by the number of aircraft movements. On the other hand, the investment in the pavement (including the maintenance requirement) is more influenced by the weight.

We calculate the upper and lower bounds of the efficient range of fixed (movement) and MCTOW related charged for jets and turboprops. The efficient charges lie between incremental and standalone costs. Any price within this wide range is economically efficient—that it there is no cross subsidy between the jet and turboprop charges.

Step 3: Scaling

The indicative annual costs, based on the return of and return on capital plus OPEX, significantly exceed the proposed airfield revenue due to the slow start in prices. Hence, in order to translate the range of estimated charges into a range which can provide a useful guide to pricing, the charges need to be scaled down to reflect the expected level of cost recovery. Cost recovery in the first year is expected to be approximately 59% of the estimated full cost.

Step 4: Application to price analysis

The wide range of efficient charges means that in setting prices, it is necessary to consider both fairness and the commercial sensibility of the proposed prices. There are many combinations of prices that can be set that would allow cost recovery within these ranges of incremental and standalone costs, while also ensuring that no more than the total costs are recovered.

For example, one common approach is to set prices such that they represent the same percentage of standalone costs or the same point on the range between incremental and standalone costs. Under this approach, both jet and turboprop traffic pay their incremental costs and make an equivalent contribution towards the common costs.

We estimate the scaled fixed charges which would result from an approach where both jet and turbo would pay 50% contribution towards the movement-related costs.

This range is between $147 and $164 per movement. The variable charges are then derived to achieve the target revenue.

It is also important to recognise that the allocation between movement and weight related costs is more complicated than assumed for the purposes of this illustration. Some pavement costs are

movement related. Hence, the stand-alone movement costs in Figure 1 provide an upper bound for the estimates of such costs, while the weight related costs are likely somewhat higher.

The proposed charges fall comfortably within the reasonable bounds suggested by the analysis in this note.