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Board of Airline Representatives of Australia Inc

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Dr Wendy Craik
Presiding Commissioner
Economic Regulation of Airport Services
Productivity Commission
Level 2, 15 Moore Street
Canberra City ACT 2600, Australia

Dear Dr Craik,

Estimation of the likely aeronautical asset values at the time of sale

In its April 2011 submission the Board of Airline Representatives of Australia (BARA) provided its estimates of the likely aeronautical asset values of Brisbane, Melbourne and Perth airports at the time of sale. Since lodging its submission, BARA has received interest and questions from airport operators about how the values were determined. In the interests of transparency and encouraging robust debate, in this short supplementary submission, BARA describes how the values were derived.

Valuation approach and assumptions

The valuation approach used was a 10 year discounted cash flow (DCF) model based on a combination of publicly available and assumed values. The models discount the value of forecast revenues and costs from aeronautical services. To take into account the long-lived nature of the assets, the models assume a residual value of both the starting assets and ongoing capital expenditure after 10 years using straight line depreciation.

In developing these estimates, BARA does not contend that it had access to the all the same information available to potential bidders. It may well be that bidders took differing views to likely revenues and costs in developing their bids for the airports.

However, the publicly available data, together with sensible assumptions, do provide a basis for assessing the reasonableness of the airport operators' revalued amounts, given the possible 'free cash flows' that could be generated from the aeronautical assets. Many of the key pricing parameters, initial revenues and costs were known prior to sale. These facts quickly establish rational bounds around the likely values. The available evidence supports BARA's position that the values were far less than the revalued amounts now embedded in the 'line in the sand' valuations.

The assumptions used in the models for Brisbane, Melbourne and Perth airports are shown in Table 1. Each of the assumptions is briefly described below.

Table 1 **Assumptions used in the 10 year cash flow models**

Assumptions (years 1 to 5)	**Unit**	**Brisbane**	**Melbourne**	**Perth**
Initial aeronautical revenues	'000	34,186	49,949	16,756
CPI	%	2.5	2.5	2.5
X factor on prices	%	4.5	4.0	5.5
Volume growth	%	4.5	4.0	5.5
Operating costs	'000	Actual	Actual	Actual
Capital investment	'000+CPI	12,300	14,000	8,000
Asset life (investment)	Years	50	50	50
WACC (pre tax nominal)	%	12%	12%	12%
Assumptions (Years 6 to 10)				
CPI	%	2.5	2.5	2.5
X factor on prices	no.	2.5	2.0	3.5
Volume growth	%	4.5	4.0	5.5
Operating costs	'000+CPI	Historic average	Historic average	Historic average
Capital investment	'000+CPI	12,300	14,000	8,000
Asset life	50	50	50	50
WACC (pre-tax nominal)	12%	12%	12%	12%

Initial aeronautical revenues

The initial aeronautical revenues were sourced from the 1997-98 regulatory accounts.[1] These amounts are indexed by the growth in traffic volumes and the CPI-X price caps to forecast future aeronautical revenues.

It is noticeable that once operating costs are subtracted, the 'free' (ie that available to fund asset costs) aeronautical cash flows available at each airport in 1997-98 were modest compared to the revalued asset amounts. In the case of Brisbane Airport, the initial free aeronautical cash flows are only around 3 per cent of the revalued amounts. In the case of Perth Airport, aeronautical revenues were only a small amount above operating costs.

Volume growth

Strong growth in volumes (landed tonnes) are assumed over the 10 years, and set equal to the 'X' factor applied to prices for the first 5 years. The assumed growth far exceeds the actual growth achieved at Brisbane and Melbourne airports (Table 2).

Table 2 **Forecast and actual landed tonnage growth, (%) total, 1997 to 2007**

	Brisbane	**Melbourne**	**Perth**
Forecast	51%	45%	42%
Actual	26%	21%	42%

[1] While the 1997-98 regulatory accounts represent the first year under the CPI-X price caps, it is the first year available to set the aeronautical revenues for each airport. It is considered unlikely that there were large fluctuations in the aeronautical revenues at each airport between 1996-97 and 1997-98.

With the removal of the CPI-X price caps, most airports have moved to passenger-based, rather than tonnage-based, charges. However, it is unlikely this change in charging structure was envisaged as part of the bid process.

Aeronautical price caps

The known CPI-X price caps are used for the first five years. The models then assume a reduction in the 'X' factor applied to aeronautical prices in the second five years. In each case the X factor is reduced by 2 per cent, leaving outcomes broadly consistent with Adelaide Airport's publicly stated expectation. The same high level of volume growth as assumed in the first five years is maintained in indexing revenues in the second five years.

Operating costs

Actual operating costs are used for the first five years, then the average of the five years indexed by CPI for the remaining five years. This approach generates a very high level of operating cost efficiency. For example, Perth Airport's operating costs per landed tonne (in nominal terms) falls from around $4.30 to $3.10 over 10 years. The real reductions in operating costs per unit of output are much higher. All such productivity improvements translate directly into higher asset values. If bidders considered that they should retain at least part of such productivity improvements, then this would reduce the impact of the improvements on the asset values.

Maintenance capital

The models assume an underlying level of maintenance capital expenditure that is not priced through the 'necessary new investment' (NNI) arrangements, but included within the price caps. For Brisbane and Melbourne airports, the amounts are set with reference to the level of depreciation in the 1997-98 regulatory accounts, indexed by CPI. For Perth Airport, a larger value of $8 million (compared to around $5.2 million in the 1997-98 regulatory accounts) is assumed, reflecting the often inadequate condition of many of the airport's aeronautical assets at the time of sale. A 50 year average asset life is applied to capital expenditure. It should be noted that a residual value of the expenditure is included in the 10^{th} year of the model, rather than expensing all the capital costs within the 10 year timeframe.

Weighted average cost of capital

A nominal pre-tax weighted average cost of capital (WACC) of 12 per cent is assumed for discounting purposes. This WACC is based on a common asset beta of 0.7 and a debt margin of 1.5 per cent. The debt margin is lower than current values post global financial crisis, but consistent with prevailing rates in the late 1990s.

Aeronautical asset valuation outcomes

The outcomes for Brisbane, Melbourne and Perth airports are shown in Table 3.

Table 3 **10 year discounted cash flow models, Brisbane, Melbourne and Perth Airports**

Brisbane	**1997-98**	**1998-99**	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**
Opening and closing asset values	-118,685									106,817
Residual capex value										165,559
Capex	-12,300	-12,608	-12,923	-13,246	-13,577	-13,916	-14,264	-14,621	-14,986	-58,580
Revenue	34,186	35,010	35,854	36,718	37,603	39,295	41,063	42,911	44,842	46,860
Opex	-19,200	-18,087	-18,687	-18,575	-19,103	-19,078	-19,332	-19,498	-19,734	-19,896
Net cash flow	**-115,999**	**4,315**	**4,244**	**4,897**	**4,923**	**6,300**	**7,466**	**8,792**	**10,121**	**240,759**
Melbourne	**1997-98**	**1998-99**	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**
Opening and closing asset values	-234,102									210,691
Residual capex value										140,233
Capex	-14,000	-14,350	-14,709	-15,076	-15,453	-15,840	-16,236	-16,642	-17,058	-17,484
Revenue	49,949	51,168	52,416	53,695	55,005	57,492	60,090	62,806	65,645	68,612
Opex	-22,162	-21,934	-21,982	-24,680	-23,257	-23,838	-24,434	-25,045	-25,671	-26,313
Net cash flow	**-220,315**	**14,884**	**15,725**	**13,939**	**16,295**	**17,814**	**19,420**	**21,120**	**22,916**	**375,739**
Perth	**1997-98**	**1998-99**	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**
Opening and closing asset values	-37,331									33,598
Residual capex value										80,133
Capex	-8,000	-8,200	-8,405	-8,615	-8,831	-9,051	-9,278	-9,509	-9,747	-9,991
Revenue	16,756	17,147	17,548	17,958	18,377	19,194	20,047	20,938	21,869	22,841
Opex	-11,064	-10,350	-9,438	-9,390	-10,312	-10,570	-10,834	-11,105	-11,383	-11,667
Net cash flow	**-39,638**	**-1,403**	**-295**	**-48**	**-766**	**-427**	**-65**	**324**	**739**	**114,913**

The estimated value of the aeronautical assets at the time of sale (ie the 'starting' asset value) is the balancing item, given the discounted value of expected revenues and costs. Only one tenth of the value of the aeronautical assets is 'consumed' over the period, with a residual value representing the potential future value of the assets after the first 10 years.

The values for Brisbane, Melbourne and Perth airports are $119 million, $234 million and $37 million, respectively. These amounts were then rounded upwards for the estimates contained in BARA's April 2011 submission.

One remaining issue is the value of any 'surplus' capacity in the aeronautical assets. Airport operators could argue that they expected to earn very high free cash flows on the existing assets after the first 10 years. This in turn would increase the underlying value of the assets. However, the impact of any aeronautical surplus capacity on the amount bidders were prepared to pay for the leases is likely to be modest. One reason for this is that the value of the free cash flows after 2006-07 is discounted heavily through the compounded WACC of 12 per cent.

The practical amount of surplus capacity in the existing aeronautical assets after the first 10 years is also questionable. All airport operators have stressed the need to encourage investment in their aeronautical assets to accommodate growth. Given the large capital programs implemented at each airport (both airfield and terminals), it seems that the capacity of the existing assets was largely exhausted after the first 10 years of privatisation.

Please contact the undersigned should there be any requirement for additional information in relation to any of the information provided in this supplementary submission.

Yours sincerely

Warren Bennett
Executive Director