



*SYDNEY AIRPORTS CORPORATION  
LTD.*

Aeronautical Pricing Proposal

Draft Decision

February 2001

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## ■ Glossary

AAA	Australian Airports Association
APAC	Australia Pacific Airports Corporation
BA	British Airways
BAC	Brisbane Airport Corporation
BARA	Board of Airline Representatives of Australia
CAA	Civil Aviation Authority (UK)
CPI	Consumer Price Index
Draft statement	Australian Competition and Consumer Commission, <i>Draft Statement of Regulatory Approach to Price Notifications</i> , April 1998.
DRP	Australian Competition and Consumer Commission, <i>Draft Statement of Principles for the Regulation of Transmission Revenues</i> , May 1999.
FAC	Federal Airports Corporation
GDP	Gross Domestic Product
IATA	International Air Transport Association
LFA	Leigh Fisher Associates
MRP	Market Risk Premium
MTOW	Maximum Take Off Weight
NECG	Network Economics Consulting Group
NERA	National Economics Research Associates
NNI	Necessary new investment
NPV	Net Present Value
NSWSCC	New South Wales State Chamber of Commerce
OAOA	Overnight Airfreight Operators Association
ODRC or DORC	Optimised Depreciated Replacement Cost
Opus	Opus International Consultants Ltd
PS Act	<i>Prices Surveillance Act (Cth) 1983</i>
RAAA	Regional Airlines Association of Australia
RBA	Reserve Bank of Australia
RIVROC	Riverina Regional Organisation of Councils

SACL	Sydney Airports Corporation Ltd
The Commission	The Australian Competition and Consumer Commission
The draft proposal	Sydney Airports Corporation Ltd, <i>Draft Aeronautical Pricing Proposal</i> , December 1999.
The revised proposal	Sydney Airports Corporation Ltd, <i>Revised Draft Aeronautical Pricing Proposal</i> , October 2000.
TRL	Transport Research Laboratory
WAC	Westralia Airports Corporation
WACC	Weighted Average Cost of Capital

## ■ **Executive summary**

In October 2000 Sydney Airport Corporation Limited (SACL) submitted a *Revised Draft Aeronautical Pricing Proposal* (the revised proposal) to the Australian Competition and Consumer Commission (the Commission) to increase certain aeronautical charges at Sydney (Kingsford Smith) Airport (Sydney Airport). Aeronautical charges are paid by airlines for services such as aircraft take off and landing, aircraft taxiing and parking and charges for use of the international passenger terminal. The proposed price increases average 130 per cent.

Two major factors account for the proposed price increase. One is the recovery of the costs associated with substantial new investments undertaken in the lead up to the Olympics. The second is an increase in the rate of return on assets.

The Commission's draft decision is that it would not object to an average 79 per cent increase in aeronautical charges. The prices are lower than those sought by SACL. This reflects the Commission's concern with a number of aspects of SACL's proposals, in particular:

- the proposal's application of the dual till approach to pricing;
- the land valuation used, and
- the operating and maintenance costs used.

SACL sought price increases which would increase annual revenues by \$116 million per annum, from \$89 million to \$205 million. This represents an increase of around 130 per cent.

The Commission's draft decision objects to the proposal but approves lower price increases. The prices accepted would increase SACL's annual revenue to \$160 million, an increase of \$71 million or 79 per cent. This is approximately 60 per cent of the increase sought by SACL. In the future, revenue will increase as traffic volumes grow.

The higher charges are levied on airlines. If passed on to airline passengers the increases will add around \$2 to a domestic return flight to or from Sydney and around \$10 to an international flight to or from Sydney. Airfares for regional travellers are, in many cases, not expected to increase at all.

## **Process**

Under the *Prices Surveillance Act (Cth) 1983* (PS Act) SACL must submit proposals to increase aeronautical charges to the Commission. The Commission may object to the proposal.

In reaching its draft decision on the revised proposal the Commission carried out an extensive public consultation process. In October it released an issues paper seeking submissions by 30 November 2000. The Commission received 15 submissions from airlines, airport operators and other interested parties. In mid-December the Commission held public discussion forums in Melbourne and Sydney.



**The Commission now seeks submissions in response to its draft decision by close of business 5 March 2001.** It aims to release a final decision at the end of March. It is expected that SACL will then submit a formal notice to the Commission under the PS Act.

Given the complexity of the issues the Commission sought consultancy advice on a number of matters:

- from Professor Kevin Davis on the rate of return proposed;
- from Network Economics Consulting Group (NECG) on land valuation and the ‘dual till’ approach;
- from Dr Rohan Pitchford on land valuation; and
- from Opus International Consultants Ltd (Opus), who reviewed the asset valuation methodology used by SACL.

Alan Robertson SC also provided assistance to the Commission in its interpretation of the regulatory framework. The Commission has made consultancy reports publicly available. The reports are on the Commission’s website at <<http://www.acc.gov.au>>.

## SACL’s proposal

SACL proposes substantial price increases. The main price changes are summarised in Table (i) below. The average price increase proposed is around 130 per cent.

**Table (i): Proposed Charges**

Charge	Current rate per unit	Proposed rate per unit	Change
Runway Charge <sup>1</sup>	\$2.92 per 1000kg MTOW	\$8.00 <sup>2</sup> per 1000kg MTOW	175%
International Terminal Charge	\$7.92 per 1000kg MTOW (14.59)	\$19.00 <sup>2</sup> per passenger	74% <sup>3</sup>
Apron Use Charge	Remote stands only, \$350 per day	\$35.00 per 15 minutes or part thereof – 6am to 11pm	NA <sup>4</sup>
(Bussing/Stand Off Discount) <sup>5</sup>	NA	(\$200.00 per use)	NA
Helicopter Charges	\$2.92 per 1000kg MTOW	\$50.00 <sup>2</sup> per movement	+ 473% <sup>6</sup>
General Aviation Parking	\$11.00 per day (>2 hours)	\$60.00 per day (>2 hours)	+448%

1. The runway charges are subject to the following proposed minimum charges:
  - Scheduled regional airline services (MTOW 0-5 tonnes) - \$20 per movement;
  - Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement; and

- All other aircraft - \$50 per movement.  
Currently the minimum charge for fixed wing aircraft is \$100 per landing (equivalent to \$50 per movement).
- 2. SACL propose to levy charges for each landing and take-off. By contrast current charges are levied per landing. For purposes of comparison the charges shown here cover both take-off and landing.
- 3. Estimated MTOW equivalent price increase.
- 4. Not Applicable.
- 5. A discount of \$200 applies to airline operators who do not use an aerobridge for boarding passengers, but, are instead required to bus passengers to the plane.
- 6. Estimate, assumes average MTOW of 1.5 tonnes.

The prices are derived using the building block methodology, where charges are in effect determined through a bottom up build up of costs to arrive at the required aeronautical revenue. It involves estimating total maximum allowable revenue based on projected costs. The maximum allowable revenue is the sum of the return on capital, return of capital (ie depreciation allowance) and operating and maintenance expenditure. SACL's proposal uses projected 2000-01 costs as the basis for estimating allowable revenue.

Using the building block approach SACL estimates a maximum allowable revenue of \$243 million. The prices proposed by SACL would generate \$205 million in revenue in 2000/01 – within its estimate of the allowable revenue.

An overview of SACL's approach is provided in chapter 1 of the draft decision, with further details in the discussion about each element of the building block approach in chapters 4-10.

## **Submissions**

The Commission received 15 submissions. The main submission from users was from BARA (the Board of Airline Representatives of Australia) which represents Australian and international airlines. Qantas Airways, British Airways and the International Air Transport Association provided supplementary submissions. A number of the privatised airports, Brisbane, Perth, Melbourne and Canberra airports, provided submissions. Other submissions were received from the Overnight Airfreight Operators Association, Impulse Airlines, the Riverina Regional Organisation of Councils, the Australian Airports Association, the NSW State Chamber of Commerce, the Regional Airlines Association of Australia and the Hon John Anderson MP, Deputy Prime Minister and Minister for Transport and Regional Services. A number of local councils wrote to the Commission regarding the importance of Sydney Airport to their constituents, however, no formal submissions have been received. The submissions are available from the Commission's website at <<http://www.accc.gov.au>>.

BARA's submission is highly critical of SACL's approach. It argues that SACL's proposal does not comply with the regulatory framework. BARA's main points are as follows:

- The necessary new investment (NNI) provisions require the Commission to separate its assessment of new investments from pre-existing assets.
- In relation to pre-existing assets an assessment of prices and profitability suggests that SACL is already making reasonable returns on the airport as a whole. Because profits are already reasonable there is no economic case for an increase in prices except in relation to new investments. The approach is supported by the Unit Cost Direction which focuses on movements in unit costs.
- In relation to new investments, the additional cost should be estimated but the estimates should take into account traffic growth. BARA also applies a lower weighted average cost

of capital (WACC) to the new investments and argues that some of the investment is replacement rather than new.

BARA provided a financial model of its approach. It gives a price increase in the order of 30 per cent and an allowable revenue of around \$120 million in 2000/01.

The submissions from the private airport operators generally support SACL's proposal. A summary of these and the other submissions is provided in section 1.4 of the draft decision.

## **Regulatory framework**

'Aeronautical' services at Sydney Airport are declared under section 21 of the PS Act. As a result, SACL must notify the Commission if it wants to increase prices for these services. Aeronautical services comprise the main services required for aircraft take off and landing, taxiing and parking as well as services for processing passengers.

Other services such as retail, VIP lounges, car rental facilities and car parking are not declared. However, the prices, costs and profits of some of these services are monitored by the Commission under section 27(A) of the PS Act. The services to be monitored are set out in Direction No. 21 made by the Minister for Financial Services and Regulation. Services covered by the monitoring program include aircraft refuelling, car parking and aircraft maintenance facilities.

In assessing price notices submitted by SACL the Commission is required to have regard to the following:

- *Section 17(3) of the PS Act.* This sets out the matters that the Commission must "have particular regard" to in exercising its powers under the PS Act. Section 17(3) focuses on the need to maintain investment and employment; the need to discourage a person from taking advantage of market power in setting prices; and the need to discourage cost increases arising from increases in wages and changes in terms and conditions of employment.
- *Direction No. 18.* Section 20 of the PS Act provides for the Minister to direct the Commission to give special consideration to matters other than those in section 17(3). Direction No. 18 sets out criteria which the Commission is to use in its assessment of new investment proposals. The Direction also allows the Commission to take quality of service information into account in assessing proposals to increase prices.
- *The Unit Cost Direction.* This direction was signed in October 1985 by the then Federal Treasurer Paul Keating. It states that the Commission should give "special consideration to ... the Government's policy of generally not supporting price increases in excess of movements in unit costs".<sup>1</sup>

These regulatory provisions differ from those applying to the privatised airports. The Directions covering the privatised airports establish CPI-X price caps with a cost pass through provision for new investment. Unlike the privatised airports, Sydney Airport is not subject to a price cap.

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<sup>1</sup> Copies of relevant sections of the PS Act and Minister's Directions and Declaration are contained in Appendix A.

The Commission considers that it should seek to promote the following objectives in applying the legal framework:

- the cost base underlying the proposed charges is efficient;
- the airport operator faces appropriate signals for new investment decisions;
- airport users receive appropriate signals for the efficient use of airport services; and
- the airport operator earns a reasonable rate of return which does not reflect monopoly rents.

The Commission has aimed to ensure that the principles embodied in these objectives are achieved in its assessment of SACL's aeronautical pricing proposal. The objectives are consistent with the regulatory framework. They also encourage economically efficient use of, and investment in, airport infrastructure and address the three elements of efficiency: dynamic, productive and allocative efficiency.

The first and last of the objectives reflect the requirements of the criteria set out in section 17(3) of the PS Act. The relationship between these two objectives and the PS Act is discussed in the Commission's *Draft Statement of Regulatory Approach to Price Notifications* (the draft statement).<sup>2</sup> The draft statement provides general guidance on the regulatory framework and how the Commission would assess price notifications.

The second objective, appropriate signals for new investment decisions, follows from section 17(3) and the new investment provisions in Direction No. 18. These were designed to provide incentives for Sydney Airport to undertake necessary new investment.

The second objective is also relevant in considering consistency of approach over time. In 1998 the Commission considered a notification by the (then) operator of Sydney Airport the Federal Airports Corporation (FAC) for increases in aeronautical charges at Sydney Airport.<sup>3</sup> The FAC's proposals were in part driven by additional costs of new investments being undertaken in the lead up to the Olympics. In its decision the Commission undertook to pass through costs associated with the new investments. In the absence of such consistency, there may be risks in terms of investment incentives for regulated firms.

Managing the demand side, in other words providing signals for efficient use of facilities, is particularly important for congested facilities such as Sydney Airport. The third objective, which follows from the section 17(3) criteria, is directed to this.

## **Application of the building block methodology**

The Commission considers that the building block methodology is appropriate for assessing this proposal. It is consistent with the regulatory framework, and is the preferable approach for assessing cost-based pricing proposals. This does not necessarily mean that the Commission accepts the way in which SACL has applied the methodology in its proposals.

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<sup>2</sup> Australian Competition and Consumer Commission (1), *Draft Statement of Regulatory Approach to Price Notifications*, April 1998. A copy of this document is available on the Commission's website at <<http://www.accc.gov.au>>.

<sup>3</sup> Australian Competition and Consumer Commission, (2) *Statement for the Public Register on Proposed Aeronautical Charges at Sydney (Kingsford Smith) Airport*, July 1998.

The draft decision assesses each component of the building block against the objectives outlined above. The main issues are summarised in the following discussion.

## Dual till

In the past airport prices were set by the FAC on a single till basis. The FAC adopted a rate of return target for the airport as a whole, and set aeronautical charges at the level required to meet the rate of return target. Since profitability on non-aeronautical services was high, and typically well above the target rate of return for the airport as a whole, this meant that returns on the aeronautical side of the business were low, often negative.

SACL has departed from this approach by separately identifying the costs associated with providing aeronautical services. SACL conceptually separates aeronautical services from other services, and sets prices based on the cost of providing the aeronautical services (including a rate of return on assets). This is described as a dual till approach to pricing. SACL argues that this approach follows the policy intent – only aeronautical services are declared, not the airport as a whole. SACL also argues that the dual till approach sends better signals for investment.

BARA argues that the existence of strong interdependencies between aeronautical and non-aeronautical services lends support to a single till approach. In other words the high profitability on car parking, duty free and other non-aeronautical services is only possible because of the aeronautical activities of the airport.

The draft decision considers the arguments presented by the parties and assesses SACL's proposal against the objectives set out above. The draft decision's main conclusions are as follows:

- The dual till approach is likely to provide better signals for efficient investment in *non-aeronautical services*. If profitability on those investments flows into aeronautical pricing outcomes then the operator will have limited incentives to develop non-aeronautical services.
- The use of a single till approach has superior properties in relation to allocative efficiency. In competitive markets companies typically take the profits from interdependent services into account in setting prices. 'Free' mobile phones are a possible example. As such, and as pointed out by BARA, the single till is more representative of the outcomes that would occur in a competitive environment than the dual till.
- In relation to efficient use of airport services the Commission is not persuaded that prices based on the dual till approach would provide better signals than the single till approach.
- SACL's application of the dual till does not adequately address the scope of the airport operator to take advantage of market power.

The discussion suggests that the dual till approach proposed by SACL has disadvantages both in relation to economic efficiency and in relation to the regulatory framework covering Sydney Airport. Similarly the single till approach has limitations, again in relation to economic efficiency, but also in relation to the Government's policy intent.

The draft decision proposes an alternative application of the dual till which takes into account the airport operator's financial performance in the provision of certain non-aeronautical services.

The Commission considers that the approach adopted will yield better economic efficiency outcomes than SACL's proposals and is consistent with the regulatory framework. The approach provides the same incentives for investment into non-aeronautical services as SACL's proposal, but goes some way to addressing the proposal's limitations in relation to allocative efficiency and market power.

In principle the non-aeronautical services taken into account in the Commission's alternative application of the dual till should be limited to those services where the airport operator has a significant degree of market power. However, a full assessment of the coverage of the regulatory framework is considered beyond the scope of this decision and more properly a matter for the Productivity Commission in its review of the airports regulatory framework.

Nevertheless the existing framework already provides regulatory scrutiny over some non-aeronautical services. Direction No. 21 requires the Commission to monitor the prices, cost and profits of specified aeronautical-related services. These include car parking and refuelling charges. As stated in the Government's *Pricing Policy Paper* (the pricing policy paper) the monitoring program recognises that airport operators may have market power in the provision of these services.<sup>4</sup>

The draft decision takes the airport's performance in providing the monitored 'aeronautical-related' services into account in determining allowable revenue and prices. It does this as follows:

- first 'above normal' profits made by SACL in the provision of these services are estimated for 2000/01.
- these above normal profits are then subtracted from the estimated "allowable revenues" for aeronautical services.

The draft decision is not to object to a dual till approach to pricing, but to take profitability of the monitored aeronautical-related services into account in determining aeronautical prices.

## Land value

SACL values aeronautical land by estimating the site's market value in its best alternative use. The valuation adopted is based on use of the site in mixed residential, commercial and industrial uses. The resulting valuation is \$705 million.<sup>5</sup> SACL supports this approach by arguing that the market value captures the opportunity cost of the land and sends the right signals for using the land and investing in land.

BARA by contrast argue that the opportunity cost of the land is zero since legislation prevents SACL from selling the land or using it for other purposes.

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<sup>4</sup> Department of Transport and Regional Development, *Pricing Policy Paper*, November 1996.

<sup>5</sup> Includes landfill costs.

The approach adopted in the draft decision supports the principle of using opportunity cost, but questions SACL's application of the concept. The draft decision raises two main concerns about SACL's approach. The first is that SACL has not taken into account the costs of converting the site to alternative uses, for example the costs of demolishing facilities on the site. The second is that SACL has only considered the private costs and benefits of selling the site. In practice the Commonwealth is the owner of the airport and would make the decision to close or relocate the airport. The considerations it would be likely to take into account are likely to be broader than those of SACL. They could include the cost to the Commonwealth of additional transport infrastructure to service a relocated airport, and broader social issues such as aircraft noise.

The draft decision concludes that the Commission is not persuaded that SACL has arrived at a reasonable measure of opportunity cost. In light of difficulties of identifying and quantifying opportunity cost, the draft goes on to consider the historic cost of the land as an alternative basis for valuing the site.

Historic cost has three main advantages. The first is that the historic cost of land is readily identifiable and less subjective than opportunity cost. The second is that it provides compensation to the owner of Sydney Airport for investments into land already undertaken by providing a rate of return on the investments. The third is that it provides appropriate incentives for the airport operator to acquire additional land.

In general though, the Commission has not adopted an historic cost approach in valuing assets, instead favouring valuations based on Depreciated Optimised Replacement Cost (DORC or ODRC). The main reasons for this are explained in the Commission's *Draft Statement of Principles for the Regulation of Transmission Revenues* (DRP):

While historic cost, if available, offers (or appears to offer) a firmer base than DORC, there are many aspects which make it unsuitable as a method of establishing a cost base consistent between different network owners. Some issues are the following:

- inconsistent past accounting practices with respect to how much of an asset was capitalised e.g. in the past network assets had a high day labour content which was not treated in a common way between the transmission network service providers;
- the industry has been subjected to structural change which has often been done without sufficient attention to asset valuation;
- very similar assets in different networks can have different historic values due to different purchasing practices; and
- attempts to inflate historic costs to current costs are fraught with problems and will frequently result in a much higher value than a depreciated current replacement cost based on modern equipment of equivalent capacity. Because of technological improvements and economies of scale the cost in real terms of most electricity assets has fallen consistently over time.<sup>6</sup>

However, these problems tend not to arise in relation to land. In particular while technological change is important in considering the cost of purchasing plant and equipment it is not relevant in considering land. The Commission weighed up the advantages and

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<sup>6</sup> Australian Competition and Consumer Commission (3), *Draft Statement of Principles for the Regulation of Transmission Revenues*, May 1999, (DRP). Available on the Commission's website at <<http://www.accc.gov.au>> by following the 'electricity' hot-link.

disadvantages of historic cost valuation in considering the valuation of land easements for electricity transmission in NSW and the ACT, concluding in favour of historic cost.<sup>7</sup>

In comparing the merits of historic cost and SACL's proposed approach, the draft decision also considers the efficiency signals generated by the land valuation proposed in terms of use of the land, signals for relocation of the airport and signals for new investment. It concludes that there is no evidence to suggest that SACL's proposals would send better signals. In particular, historic cost valuation of land provides appropriate signals for land purchases. The land is added to the asset base at purchase price and the airport operator is compensated by a rate of return on the additional assets.

The draft decision is to use the historic purchase cost of land for purposes of setting aeronautical prices at Sydney Airport.

Adoption of an historic cost valuation raises the question of whether to index the land valuation and if so at what rate. Under a real rate of return on capital approach, the historic cost should be indexed forward. Alternatively, a nominal approach would apply a nominal rate of return to the unindexed historic purchase cost of land. Given that SACL's building block approach is based on a real rate of return the Commission considers the former method appropriate in this case.

The base for indexation adopted for purposes of this decision is the Consumer Price Index (CPI). The attraction of the CPI is that it is well documented and easy to apply. The CPI has been used to index land values overseas and was used by the Commission to index electricity transmission land easement valuations.<sup>8</sup> An alternative to the CPI would be to adopt a land value index. A practical limitation of this approach is that there are no published land value indexes. More fundamentally, a land value index would inflate the historic cost of land to its current market value, raising the same concerns as discussed above.

The Commission's draft decision is to use the indexed historic purchase cost of land for the purposes of setting aeronautical prices at Sydney Airport. The index adopted is the Consumer Price Index.

The CPI-indexed historic cost of land is \$488 million, compared to \$705 million proposed by SACL.<sup>9</sup>

## Valuation of non-land assets

SACL values non-land aeronautical assets using the ODRC methodology. Valuation of the aeronautical asset base was undertaken by consulting engineers Maunsell McIntyre Pty Ltd (Maunsell McIntyre). Using this approach non-land aeronautical assets are valued at around \$1.19 billion in 2000/01.

SACL proposes a depreciation allowance using straight line depreciation over the remaining useful life of the aeronautical assets. Consulting engineers Maunsell McIntyre undertook the

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<sup>7</sup> Australian Competition and Consumer Commission (4), *Decision on NSW and ACT Transmission Network Revenue Caps, 1999/00-2003/04*, January 2000. Available on the Commission's website at <<http://www.accc.gov.au>> by following the 'electricity' hot-link.

<sup>8</sup> Id.

<sup>9</sup> Land values include landfill.



assessment of the useful life of the assets. The resulting depreciation allowance in 2000-01 amounts to \$46.7 million.

The Commission engaged an engineering consultant, Opus International Consultants Ltd (Opus), to review SACL's valuation. Opus generally supports the approach adopted by Maunsell McIntyre, but raises a number of specific issues. The main issue is that the valuation does not adequately optimise the assets. Opus's report identifies a number of redundant assets and areas where passenger terminal layout could be improved. However, the overall impact on the valuation is relatively minor.

A further issue identified by Opus is that depreciation rates are too high on some assets.

Drawing on Opus's advice the Commission's draft decision seeks further information from SACL as follows:

- A revised valuation based on the optimisation adjustments identified in chapter 5 of the draft decision. These adjustments are based on Opus's recommendations.
- Revised depreciation costs, based on the specific adjustments identified in chapter 5 of the draft decision. Again these adjustments are based on Opus's recommendations.

For purposes of the draft decision the Commission has adopted the valuation provided by SACL, but revised depreciation costs down by 5 per cent. This reflects the Commission's estimate of the impact of the revisions.

The Commission's draft decision is not to object to the non-land asset valuation proposed by SACL, but to revise depreciation costs down by 5 per cent. The Commission has sought additional information from SACL on a number of specific issues and as a consequence may make further adjustments for purposes of the final decision.

## **Cost allocation**

SACL's proposal allocates costs between the aeronautical and non-aeronautical parts of the business using clearly specified allocation rules.

BARA expresses concerns in relation to some of the allocation outcomes, and states that they would consider the issue in more detail and provide further comments in future.

The Commission has reviewed the cost allocation rules. It considers that the rules used are reasonable and notes that they are consistent with the approach adopted by the Commission in its Adelaide Airport MUIT decision.<sup>10</sup>

The Commission's draft decision is not to object to the allocation of costs proposed by SACL.

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<sup>10</sup> Australian Competition and Consumer Commission (5), *Adelaide Airport, Proposal to pass through the price cap the costs of a Multi-User Integrated Terminal – Decision*, October 1999.

## **Efficiency of costs – operating and maintenance costs**

Operating and maintenance (O&M) expenditure covers labour costs, utilities and services, property maintenance and general administration. O&M costs for the airport were estimated and allocated between aeronautical and non-aeronautical services using SACL's Activity Based Costing (ABC) Model.

SACL's proposal estimates that aeronautical O&M expenses in 2000-2001 will be \$64.2 million. This represents around one quarter of the allowable revenue proposed by SACL. Since SACL lodged its proposal it has revised O&M expenses to \$56.4 million, removing those costs that will not continue in future, in particular costs associated with privatisation and one-off costs associated with the Olympics.

BARA's submission argues that SACL's costs are too high. BARA analysed unit costs at Melbourne, Brisbane and Perth to argue that the cost base should be around \$40 million.

SACL's proposal acknowledges that its costs are higher than the other airports, but argues that this is because of factors specific to Sydney Airport. SACL commissioned a specialist US consulting firm, Leigh Fischer Associates (LFA), to review aspects of SACL's O&M costs. LFA identifies a number of factors which would result in relatively high O&M costs at the airport. The LFA report, while offering justification for SACL's current level of operating costs, is not a forward looking exercise on what future cost savings and efficiency gains could be made by Sydney Airport.

Short of a detailed independent review of O&M costs the Commission is not well placed to accurately gauge the reasonableness of the level of costs proposed by SACL. However, based on the experience of the privatised airports it seems reasonable to assume that substantial savings would be possible over time.

The approach adopted in the draft decision is to use the average level of cost savings achieved by the Phase I airport operators (Melbourne, Brisbane and Perth) over the three years since privatisation. The average saving is 5 per cent per annum in real terms.

The draft decision adopts the revised \$56.4 million O&M costs proposed by SACL as a starting point, with real reductions of 5 per cent per annum modelled over a five year period.
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## **Rate of return**

SACL proposes a post-tax nominal return on equity of 14 per cent. The rate of return is derived using an asset beta of 0.70. In line with the Commission's DRP, tax is estimated using cash flow modelling and added back into allowable revenue.

BARA argues that the post-tax nominal return on equity should be 10.9 per cent. The main driver of the difference between BARA's submission and SACL's proposal is the asset beta which BARA argues should be 0.40.

The draft decision makes two changes to SACL's proposal. The first is to use an asset beta of 0.60 rather than the 0.70 proposed. The choice of asset beta follows a detailed assessment of the passenger mix at each of the major airports and the corresponding correlation between traffic numbers in each of the groups with the national economy. The draft decision concludes that Sydney Airport has the lowest systematic risk of the airports reviewed,

primarily because of the high percentage of traffic generated by inbound tourism. The use of a 0.60 asset beta compares with asset betas of 0.61 to 0.75 adopted in other airport decisions.

The second change is to adopt a different debt equity ratio. In line with other decisions made by the Commission the draft decision adopts a 60:40 debt to equity (compared to 50:50 used by SACL).

The net effect of the changes is to give a post-tax nominal return on equity of 13.7 per cent.

The draft decision adopts a post-tax nominal return on equity of 13.7 per cent with an asset beta of 0.60 and a debt equity ratio of 60:40.

## **New Investment**

The draft decision separately considers the new investments in SACL's proposal against the necessary new investment (NNI) criteria in Direction No. 18. These criteria focus on the need for the investment, user support and the relationship between the costs of the investment and price increases.

The discussion concludes that the investments were required to meet the demands on Sydney Airport associated with the Olympics and are required to accommodate on-going traffic growth at the airport. Passenger surveys conducted for purposes of the Commission's annual regulatory reports also indicate that passengers are satisfied with the changes made at the airport.

As required by the regulatory framework the Commission considers the relationship between the price increases proposed by SACL and the costs of the new investment. This is done as part of the overall assessment of SACL's proposal.

The Commission's view is that SACL, in addressing pricing and cost issues across its entire asset base, has indirectly addressed the NNI criteria. The Commission's own analysis and draft decision regarding SACL's application of the building block approach will ensure that the investment made by SACL since 1 July 1998 is appropriately reflected in aeronautical charges. The Commission's draft decision is that the NNI criteria have been addressed.

## **Financial modelling**

The draft decision uses the components of the building block approach discussed above to derive an allowable revenue. In applying the building block approach, SACL bases its estimate of allowable revenue on a one-period financial model. By contrast, the Commission has used a financial model to calculate allowable revenues over a five-year period. The financial modelling is explained in chapter 11 of the draft decision.

There are two reasons for modelling SACL's costs and revenues using a multi-period financial model. The first reason relates to the regulatory framework as applying the building block methodology over time would result in falling prices. There are two reasons for this:

- traffic growth over the five years drives down unit costs, and
- operating and some other expenses are likely to fall.

Under the current arrangements there is no mechanism for the Commission to ensure SACL lowers prices in future as traffic volume grows and costs fall.

The second reason for using a multi-period financial model is to mitigate the immediate price shock to airport users. The financial modelling ‘smooths’ prices, translating the cost and revenue data into a constant nominal price over the forecast period, providing an equivalent net present value of cash flows to SACL. This smoothed price generates steadily increasing revenues for SACL over the five-year period. An alternative scenario might be for larger price increases now with prices subsequently driven down in the future. In the case of privatised airports, for example, this was achieved through a CPI-X price cap.

The rationale for modelling allowable revenues and prices over a *five-year* period is that this time horizon is commonly used for regulatory purposes. The price caps imposed on the privatised airports, for example, had a five-year horizon prior to review. Similarly in the UK, five years is the duration of the price-caps set by the Civil Aviation Authority (CAA) for application to privatised airports. The Commission therefore recommends that aeronautical prices at Sydney Airport should be reviewed after five years from the introduction of the new prices.

The draft decision is to model SACL’s costs and revenues over a five-year period factoring in growth in traffic volume and the operating and maintenance cost reductions discussed in chapter 9. The Commission also recommends a review of charges after five years from the introduction of the new prices.

On the basis of the building block inputs discussed above, the Commission estimates an allowable revenue figure for 2000/01 of \$179 million. After smoothing prices to allow for real cost savings and volume growth over the next five years, this allowable revenue falls to \$160 million in 2000/01. This latter figure is reflected in the set of prices endorsed by the Commission.

Using the building block approach allowable revenue is calculated in Table (ii) on the following page:

**Table (ii): Allowable revenue**

<b>Allowable revenue 2000/01</b>	<b>SACL's Proposal</b>	<b>Commission Draft Decision</b>
Asset base (2000/01)	\$1,690.3m	\$1,438.9m
x WACC	14% (post-tax nominal return on equity)	13.7% (post-tax nominal return on equity)
= Return on capital	\$130.7m	\$98.0m
+ Return of capital (depreciation)	+ \$46.7m	+ \$38.1m
+ O&M costs	+ \$64.2m	+ \$56.4m
= Sub-total	\$241.6m	\$192.5m
+ Net taxation*	+ \$16.2m	+ \$8.6m
- Assumed capital gain on land**	- \$14.6m	\$0
- Contribution – aeronautical-related services	\$0	- \$22.6m
- Impact of Price Smoothing	\$0	- \$18.4m
<b>Total allowable revenue 2000/01</b>	<b>\$243.2m<sup>a</sup></b>	<b>\$160.2m</b>

\* SACL use a post-tax real WACC in calculating their allowable revenue. This requires the explicit modelling of the cash flow associated with taxation, incorporating this into the calculation of the revenue target.

\*\*The capital gain on land represents a component of the real return to SACL that is not explicitly captured in the cash flows. Accordingly, allowable revenue is reduced by the capital gains over 2000/01.

<sup>a</sup> \$243.2m is SACL's calculation of its maximum allowable revenue. Of this SACL's proposed charges would recover revenue of \$205m for 2000/01.

## Structure of Prices

SACL proposes to restructure charges. The main changes are:

- An increase in the charge for runways, taxiways and the associated airfield relative to the international terminal charge.
- Introduction of a new apron use charge. This would introduce a time based charge for use of the aprons.
- Introduction of a bussing/stand off discount.
- A move from MTOW to passenger based charges for use of the international terminal.

These changes tend to more closely align prices to the cost of providing services than the current price structure. Passenger numbers have a closer relationship than aircraft weight to terminal costs. Likewise, a time-based measure is likely to best reflect the full costs (including opportunity cost) of apron parking. The proposed structure therefore better reflects the drivers of costs than the current aeronautical charging structure. Accordingly, the draft

decision supports the proposed restructuring of prices, subject to adjustments to price levels as discussed above.

The proposals do not, however, address a number of concerns in relation to congestion management. Given emerging capacity constraints the Commission considers that restructuring of prices to send signals for more efficient use of infrastructure will become increasingly important over time. In this respect the FAC’s decision to remove the peak and shoulder period surcharges that had existed for a number of years was disappointing.

Introduction of peak period charges could improve congestion management. In particular it could discourage airlines from holding more peak period slots than necessary by encouraging airlines to move more flights to off peak times. Peak period charges would also encourage airlines to use peak period slots more intensely by using larger aircraft during peak periods, and could help to free up slots for new entrants.

SACL has recognised the issue by flagging the possibility of further changes to introduce time based (peak/off peak) charges.

The Commission’s draft decision is to not object to the price restructuring proposed by SACL. The draft decision also encourages SACL to further restructure charges to address emerging capacity constraints and associated congestion.

## Draft decision

The Commission’s draft decision is that it would not object to the prices specified in Table (iii). These prices are expected to generate revenues in line with the Commission’s calculated allowable revenue figure of \$160m.

**Table (iii): Approved prices**

Charge	Unit	Price Levels	
		SACL Proposal	Commission Draft Decision
Runway	per 1000kg MTOW per movement	\$4.00	<b>\$3.07</b>
International Terminal	per passenger	\$9.50	<b>\$7.28</b>
Apron Parking	per 15 minute block	\$35.00	<b>\$35.00</b>
(Bussing/stand off discount)	Per use of bus	(\$200.00)	<b>(\$200.00)</b>
Helicopter Movements	per movement	\$25.00	<b>\$25.00</b>
General Aviation Parking	per GA movement	\$60.00	<b>\$60.00</b>

## ■ Chapter 1: Introduction

The draft decision is structured as follows. This chapter outlines the Commission's assessment process, past price notifications at Sydney Airport and the current revised draft aeronautical pricing proposal submitted by SACL.

Chapter 2 considers the regulatory framework. The chapter sets out a number of objectives which form the basis for the Commission's assessment of SACL's proposal. These objectives are based on the requirements of the regulatory framework.

Chapter 3 reviews the building block methodology used by SACL. The draft decision does not object to SACL's use of the methodology, but questions a number of aspects of SACL's *application* of the methodology. These are discussed in chapters 4 to 10.

Chapter 4 reviews the dual till approach adopted by SACL. The chapter considers the merits of dual till compared to single till. It also considers SACL's application of the 'dual till' approach.

Chapters 5 to 8 focus on SACL's approach to valuing the asset base. Chapter 5 considers non-land assets. Some of the non-land assets arise from the SA2000 investment program and related projects. The regulatory framework requires the Commission to have regard to a number of specific criteria in relation to such new investments. The Commission's assessment of SACL's proposals against the criteria is discussed in chapter 6. Chapter 7 assesses land assets. Allocation of the asset base between 'aeronautical' and 'non-aeronautical' services is considered in chapter 8.

The operating expenditures used by SACL are reviewed in chapter 9, and the rate of return in chapter 10.

The Commission undertook financial modelling to derive the prices in this draft decision. The modelling is explained in chapter 11. As well as proposing price increases, SACL has proposed to restructure charges. The Commission's position on this aspect of SACL's proposal is discussed in chapter 12.

The draft decision is summarised in chapter 13.

### 1.1 Commission assessment process

On 3 October 2000 SACL provided the Commission with its *Revised Draft Aeronautical Pricing Proposal* (the revised proposal).<sup>11</sup> The Commission consulted with major stakeholders of the facility and requested submissions on SACL's proposals. The Commission received major submissions from Australia Pacific Airports Corporation (Melbourne Airport), the Board of Airline Representatives of Australia (BARA), Brisbane Airport Corporation Limited (Brisbane Airport), British Airways Plc. (BA), International Air Transport Association (IATA), Canberra Airport Group (Canberra Airport), Qantas Airways

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<sup>11</sup> Copies of SACL's (1) *Draft Aeronautical Pricing Proposal*, Dec 1999, (the draft proposal) and SACL's (2) *Revised Draft Aeronautical Pricing Proposal*, Oct 2000, (the revised proposal) are available on the Commission's website at <<http://www.accc.gov.au>>.

Ltd (Qantas) and Westralia Airports Corporation Limited (Perth Airport). A summary of all submissions received by the Commission in response to SACL's revised proposal is contained in section 1.4. Copies of all submissions received by the Commission are available on the Commission's website at <<http://www.accc.gov.au>>.

The Commission conducted two forums for interested parties under the chairmanship of Commissioner John Martin. A public discussion forum was held in Melbourne on Wednesday, 13 December 2000, to discuss technical issues associated with SACL's proposal including issues relating to the regulatory framework, operating costs, asset valuation, land valuation, cost of capital and the dual till approach to pricing. The transcript from this forum is available on the Commission's website at <<http://www.accc.gov.au>>. A second discussion forum was held in Sydney on Monday, 18 December 2000, for community groups and other interested parties to discuss the impact on users of the airport and parties affected by the proposal. No presentations were made to this forum.

SACL and other interested parties will be given an opportunity to respond to this draft decision as part of the consultation process. Following the release of the Commission's draft decision interested parties are encouraged to make submissions on the preliminary conclusions. **Submissions should be forwarded to the following address by COB Monday, 5 March 2001:**

**Margaret Arblaster  
General Manager  
Transport and Prices Oversight  
Australian Competition and Consumer Commission  
PO Box 520J Melbourne, Victoria 3001  
Fax 03 9663 3699  
E-mail: [margaret.arblaster@acc.gov.au](mailto:margaret.arblaster@acc.gov.au)**

Unless a submission is marked confidential it will be made available to any person or organisation on request. Sections of submissions that are confidential should be clearly identified.

The Commission aims to assess the submissions and release its final decision by the end of March 2000.

The table on the following page provides a summary of the procedures involved in the Commission's assessment of SACL's proposals.



**Table 1(a): Time-line**

<b>Date</b>	<b>Process</b>
December 1999	SACL releases its draft proposal.
February 2000	SACL consultation with industry.
October 2000	SACL provides its revised proposal for Commission consideration.
30 November 2000	Submissions in response to SACL's revised proposal due to the Commission..
13 & 18 December 2000	Forums held in Melbourne and Sydney
Early February 2001	The Commission releases its draft decision.
February – March 2001	Public consultation process — interested parties invited to provide submissions on the draft decision.
5 March 2001	Submissions in response to the Commission's draft decision due.
End of March 2001	Commission releases its final decision.

The Commission used the following consultants in its assessment of SACL's proposal:

- Professor Kevin Davis - proposed rate of return;
- Dr Rohan Pitchford - land valuation;
- Network Economics Consulting Group (NECG) - land valuation and the 'dual till' approach, and
- Opus International Consultants Ltd (Opus) - asset valuation.

Copies of the advice received are available on the Commission's website. Alan Robertson SC provided assistance to the Commission in its interpretation of the regulatory framework. Consultancy reports, the submissions from interested parties and the forum discussion have been taken into consideration in the draft decision.

## **1.2 Past notifications at Sydney Airport**

In 1998, the Commission assessed a pricing notification given by the then operator of Sydney Airport, the Federal Airports Corporation (FAC), in relation to aeronautical services at Sydney Airport.<sup>12</sup> Under the FAC's proposals, aeronautical charges were to be varied over three years. The first year (i.e. 1998/99) involved a restructuring of charges for aeronautical

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<sup>12</sup> SACL commenced operation of Sydney Airport in July 1998 following transfer of the lease from the FAC to SACL.

services with no net increase in average prices. Proposed increased charges for aeronautical services in the second and third years were driven largely by the increased costs flowing from the FAC's capital expenditure program.

The Commission decided that it did not object to the FAC's proposal to restructure charges for the first year. The Commission formed the view that there was a strong case for the proposed move to user pays. The Commission considered that the new charges would send appropriate pricing signals for efficient use of airport services and appropriate signals for new investment decisions.

With respect to the proposals for the second and third years, the Commission had received advice that, once Sydney Airport was transferred to SACL, SACL would not be entitled to impose the schedule of price increases proposed by the FAC and would need to renotify any proposed price increases. However, the Commission stated that, regardless of such concerns, it was not in a position to make a decision at that time regarding the proposals for the second and third years. In summary, the Commission concluded that:

- The capital expenditure program was likely to result in increased costs to users of those new capital works.
- At that time, there was too much uncertainty to allow the Commission to form a view as to the appropriate level of increased charges.

Users of aeronautical services also considered that there was uncertainty regarding the rate of return generated by the Airport's aeronautical and non-aeronautical operations; traffic volume forecasts; the allocation and determination of costs (particularly depreciation charges); and the actual costs of the capital investment program.

The Commission recognised that investment expenditure at Sydney Airport was required and undertook to allow increases in charges for aeronautical services sufficient to justify the investment.

The Commission concluded that the extent to which increases in charges would be justified depended upon a review of traffic forecasts, capital expenditure incurred and resolution of depreciation and rate of return issues.

### **1.3 Current draft notification**

In December 1999, SACL provided the Commission with a draft aeronautical pricing proposal covering aeronautical services at Sydney Airport. The proposal was prepared for the purpose of SACL's industry consultation process.

On 3 October 2000 SACL submitted the revised proposal to the Commission for assessment purposes. It is this revised proposal that is the subject of this draft decision. The Commission has not yet received a formal notification under paragraph 22 (2)(a) of the PS Act.

The revised proposal relates to changes in both the structure and levels of aeronautical charges at Sydney Airport. SACL forecasts that the level of charges proposed will result in revenues of \$205 million in 2000/01, compared with an estimated \$89 million if the existing price structure were retained. The increases are attributable to three main factors:

- a revaluation of major assets such as land;

- a move to pricing based on ‘dual till’ pricing principles; and
- recovering costs associated with some \$500 million of new aeronautical investment incurred as part the Sydney Airport 2000 project (SA 2000) and related projects.

The proposed charges, and a comparison with existing charges, are set out in the following table.

**Table 1(b): Proposed Charges**

Charge	Current rate per unit	Proposed rate per unit	Change
Runway Charge <sup>1</sup>	\$2.92 per 1000kg MTOW	\$8.00 <sup>2</sup> per 1000kg MTOW	175%
International Terminal Charge	\$7.92 per 1000kg MTOW (14.59)	\$19.00 <sup>2</sup> per passenger	74% <sup>3</sup>
Apron Use Charge	Remote stands only, \$350 per day	\$35.00 per 15 minutes or part thereof – 6am to 11pm	NA <sup>4</sup>
(Bussing/Stand Off Discount) <sup>5</sup>	NA	(\$200.00 per use)	NA
Helicopter Charges	\$2.92 per 1000kg MTOW	\$50.00 <sup>2</sup> per movement	+ 473% <sup>4</sup>
General Aviation Parking	\$11.00 per day (>2 hours)	\$60.00 per day (>2 hours)	+448%

- The runway charges are subject to the following proposed minimum charges:
  - Scheduled regional airline services (MTOW 0-5 tonnes) - \$20 per movement;
  - Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement; and
  - All other aircraft - \$50 per movement.

Currently the minimum charge for fixed wing aircraft is \$100 per landing (equivalent to \$50 per movement).
- SACL propose to levy charges for each landing and take-off. By contrast current charges are levied per landing. For purposes of comparison the charges shown here cover both take-off and landing.
- Estimated MTOW equivalent price increase.
- Not Applicable.
- A discount of \$200 applies to airline operators who do not use an aerobridge for boarding passengers, but, are instead required to bus passengers to the plane.
- Estimate, assumes average MTOW of 1.5 tonnes.

The revenue increase proposed is around 130 per cent.

### 1.3.1 The building block approach

SACL uses a building block approach to derive allowable revenue. This approach involves estimating total maximum allowable revenue based on projected costs. The maximum allowable revenue is the sum of the return on capital, return of capital (ie depreciation allowance) and operating and maintenance expenditure. The return on capital is calculated by multiplying the weighted average cost of capital (WACC) by the written down (depreciated) value of the asset base.

SACL proposes to use projected 2000-01 costs as the basis for estimating allowable revenue.

### **1.3.2 Asset base**

SACL separately identifies aeronautical costs for purposes of the building block approach. Only aeronautical costs are used to calculate allowable revenue.

Valuation of the aeronautical asset base was undertaken by consulting engineers Maunsell McIntyre Pty Ltd in association with Rawlinson Australia Pty Ltd, Cost Consultants and Quantity Surveyors. Non-land aeronautical assets were valued using the Optimised Depreciated Replacement Cost (ODRC or DORC) methodology. The approach taken was as follows:

1. Estimate the cost of replacing aeronautical assets at the airport (runways, taxiways, aprons, passenger terminal buildings, roads etc) at the airport. The estimates are based on the existing configuration and layout of assets, current construction techniques and recent cost information;
2. Estimate the life of each of the assets and adjust the valuation to reflect the remaining life of the assets;
3. Optimise down the valuation to reflect redundancy;
4. Allocate joint and common costs.

Details of SACL's approach to allocating joint and common costs are provided in chapter 8.

New capital expenditure of \$27m up to November 2000 is added to the asset base.

Using this approach non-land aeronautical assets are valued at around \$1.19 billion in 2000/01.<sup>13</sup>

SACL values aeronautical land by estimating the opportunity cost of the land. This approach considers the "market value" of possible alternative uses for the land. The valuation was conducted by Jones Lang LaSalle Advisory and was arrived at as follows:

1. Conduct the valuation as if the airport as a whole were sold.
2. Divide the land area into different uses: residential (50 per cent), industrial (25 per cent), commercial (3.5 per cent) and other (roads, open space etc., 21.5 per cent).
3. For the residential component estimate the number of dwellings that could be constructed on the site by dwelling type (detached, medium density, high density, waterfront) and assign a unit price to each dwelling type. Multiply the number of units by the unit price to give a gross revenue figure.
4. Similarly for the industrial and commercial land components split the land into different uses (general industrial, light industrial etc.) and derive a gross revenue figure based on current rental rates.
5. Subtract construction and infrastructure development costs.

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<sup>13</sup> Average asset value over 2000/01.

6. Assume that land is released progressively over 15 years. Apply a 27.5 per cent discount rate to unsold land.
7. Derive the aeronautical land valuation by multiplying the valuation by the proportion of airport land designated aeronautical.

The resulting valuation is \$535 million as at 1 July 1998. To this SACL adds 'holding costs' over a five year period of 7 per cent per annum taking the total to approximately \$750 million. The rationale for this is that if an airport were to be constructed now there would be a five year period before its completion, and the facility provider would incur the costs of holding the land over that period.

SACL then subtracts the ODRC value of the seawalls and land-fill around the two north-south runways to give the land valuation of \$428m at July 1 1998.<sup>14</sup>

Since allowable revenue is based on 2000/01 costs, the land value used is indexed each year by CPI, plus an additional 3 per cent per annum. This reflects SACL's assumption that land appreciates by 3 per cent per annum in real terms.

These adjustments give an average land asset base for 2000/01 of \$502 million.

Adding land value to the value of other assets gives an average total aeronautical asset base of \$1.69 billion for 2000/01.

### **1.3.3 WACC**

The WACC proposed by SACL is 7.7 per cent post-tax real. It is derived using an asset beta of 0.7. Tax is estimated using cash flow modelling and added back into allowable revenue. Details are provided in chapter 10

### **.1.3.4 Depreciation allowance**

SACL proposes a depreciation allowance using straight line depreciation over the remaining useful life of the aeronautical assets. Consulting engineers Maunsell McIntyre undertook the assessment of the useful life of the assets. They used relevant standards and historical performance of comparable assets in making their assessment. The useful lives adopted for purposes of SACL's pricing proposals are longer for most aeronautical assets than those used by the FAC. Details are in chapter 5.

The depreciation allowance in 2000-01 amounts to \$46.7 million.

### **1.3.5 Operating and maintenance expenditure**

Operating and maintenance (O&M) covers labour costs, utilities and services, property maintenance and general administration. O&M costs for the airport were estimated and allocated between aeronautical and non-aeronautical services using SACL's Activity Based Costing (ABC) Model.

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<sup>14</sup> This avoids double counting since the ODRC valuation of the seawalls is included in the runway and taxiway valuations.

SACL’s projection of aeronautical O&M expenses in 2000-2001 is \$64.2 million. This represents around one quarter of the allowable revenue proposed by SACL. Details are provided in chapter 9 and in SACL’s revised proposal.

### 1.3.6 Allowable revenue

Using the building block approach, allowable revenue is derived as follows:

**Table 1(c): Derivation of SACL’s allowable revenue**

<b>Allowable revenue 2000/01</b>	
Asset base (2000/01)	\$1,690.3m
x WACC	x 7.7%
= Return on capital	\$130.7m
+ Return of capital (depreciation)	+ \$46.7m
+ O&M costs	+ \$64.2m
= Sub-total	\$241.6m
+ Net taxation*	+ \$16.2m
- Assumed capital gain on land**	- \$14.6m
<b>Total</b>	<b>\$243.2m</b>

\* SACL uses a post-tax ‘vanilla’ WACC in calculating their allowable revenue. This requires the explicit modelling of the cash flow associated with taxation, incorporating this into the calculation of the revenue target.

\*\*The capital gain on land represents a component of the real return to SACL that is not explicitly captured in the cash flows. Accordingly, allowable revenue is reduced by the capital gains over 2000/01.

If the prices proposed by SACL had been implemented at the start of the 2000/01 financial year, it is estimated they would have generated revenues of around \$205.4 million for 2000/01. This falls within the ‘maximum allowable revenue’ amount proposed by SACL.

### 1.3.7 Structure of prices

SACL also proposes to restructure charges. It does this in three ways:

- by not adopting uniform price increases. Landing charges, for example, increase by 175 per cent compared to 74 per cent for international terminal charges;
- by introducing a new apron use charge and a bussing/stand off discount; and
- by changing the charging basis from landed tonnes to passengers for the international terminal charge and counter terrorist first response charges.

## 1.4 Summary of submissions

The following is a brief summary of the main points made in the submissions received by the Commission in response to Sydney Airport's revised proposal.

### **Board of Airline Representatives of Australia (BARA)**

BARA submits that the magnitude of increase proposed by SACL is unjustified. In summary, it submits that the approach adopted by SACL to support the proposed price increases:

- is inconsistent with the regulatory framework governing Sydney Airport;
- does not reflect sound economic principles;
- would not be possible without the use of market power; and
- cannot be implemented practically by the Commission on the basis of the information provided by SACL.

Key aspects of the BARA submission include the following:

- the building block methodology is inconsistent with the regulatory regime, is based on flawed economic logic, would be unsustainable without the use of market power, and is unable to be implemented practically. SACL's existing rates of return are sufficient; the Commission should not re-open the prices based on pre-existing (ie pre 1 July 1998) assets;
- the magnitude of increases based on new investments is unjustified;
- the interdependencies between aeronautical and non-aeronautical services at Sydney Airport lend support to the adoption of a single till approach to pricing at the airport;
- land currently in use to provide aeronautical services at Sydney Airport should be valued at zero; any incremental land for aeronautical expansions should be valued at its efficiently incurred purchase price; the owner should be compensated for the use of non-aeronautical land to expand aeronautical services; and aeronautical charges should be reduced for the use of aeronautical land to expand non-aeronautical services;
- the Commission should take into account quality of service issues. The quality of service at Sydney Airport has been less than satisfactory and has imposed costs on the airlines, and (notwithstanding the SA2000 improvements) is lower than the service which would have been provided for the price which SACL is seeking to charge;
- SACL has provided insufficient information on a number of issues, such as operating costs, and
- BARA makes a number of submissions in relation to cost allocation issues.

BARA presents its own model for setting aeronautical prices at Sydney Airport.

BARA has also provided a paper *Regulation for Privatized Airports: Single Till Versus Multi-Till Pricing Methodologies for Sydney Airport* by Michael A Crew and Paul R Kleindorfer dated January 21, 2001. Similarly, SACL provided a statement of evidence from Alfred E Kahn dated 17 January 2001 dealing with issues of land value for providing

aeronautical services and the single till basis for charging. Given the timing of the provision of these papers they have not been fully reflected in the draft decision. The Commission invites comments on the papers in responses to its draft decision.

#### **International Air Transport Association (IATA) Submission 1 (30 November 2000)<sup>15</sup>**

IATA does not accept the use of the building block approach as used by Sydney Airport. IATA also has concerns about the dual till approach to pricing as used by Sydney Airport and argues that the single till approach should be used. As a practical consideration IATA supports BARA's suggestion that profits from non-aeronautical services be shared between user airlines and the airport. IATA submits that SACL has not applied the ODRC approach correctly and that SACL has not used the correct opportunity cost approach when estimating land value and that land value should be zero. IATA prefers the historical cost approach to asset valuation. IATA agrees with the straight-line depreciation approach and the revised economic life span adopted by SACL. IATA submits that SACL has not demonstrated that its past operating costs are efficient. IATA also made submissions as to the WACC parameters (IATA proposes a post-tax real WACC of 6.14 per cent) and comments about the proposed structure of prices. IATA believes that all new investment should be considered against the Commission's position paper on *New Investment Costs Pass-through* (new investment position paper).<sup>16</sup>

#### **IATA Submission 2 (22 December 2000)<sup>17</sup>**

IATA made a further submission in relation to the dual till/single till issue. IATA supports the retention of a refined version of the single till approach and argues the following:

- there is high interdependency between aeronautical and non-aeronautical activities;
- airports are localised monopolies, thus their pricing behaviour is tempered by a lack of formal, strong competition.
- single till is a simple system to administer;
- SACL would make high non-aeronautical profits;
- dual till would encourage under investment in aeronautical resources.

IATA's proposal is for starting prices plus an increase in aeronautical charges to recover the costs of necessary new investment less 75 per cent of the estimated increase in non-aeronautical profits from new investment in aeronautical assets.

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<sup>15</sup> International Air Transport Association, (1) *Aeronautical Pricing Proposal by Sydney Airports Corporation Ltd (SACL)*, 30 November 2000.

<sup>16</sup> Australian Competition and Consumer Commission (6), *New Investment Costs Pass-through – the distinction between 'necessary new aeronautical investment' and other forms of expenditure, as it relates to the price cap*, Position Paper, April 2000.

<sup>17</sup> International Air Transport Association, (2) *IATA submission to Australian Competition and Consumer Commission "Single Till"*, December 2000.



### **British Airways Plc (BA)**

BA made very similar comments to those contained within the first IATA submission. BA states that it strongly supports the principles upon which the single till is based and would not support a simple question of abolition (single vs. dual till) unless this was part of a new deal giving new rights to airlines. BA supports IATA's views in relation to the asset base, changes to the asset base over time, operating costs, WACC parameters and structure of prices.

### **Overnight Airfreight Operators Association Inc (OAOA)**

OAOA states that it endorses and totally supports the methodology and conclusions propounded in the BARA submission, but mentions two issues in relation to domestic dedicated express freight aircraft. OAOA reserves its position in relation to the Domestic Counter Terrorist Response Charge. In relation to the runway charge for fixed wing powered and unpowered aircraft OAOA submits that these charges should be lower during curfew times than in non-curfew times given the low aircraft utilisation resulting from the Curfew Act requirements and physical shortcomings of Sydney Airport.

### **Qantas Airways Ltd (Qantas)**

Qantas provided an additional confidential submission supplementary to the BARA submission. The submission contained information in relation to issues such as slots, load factors, fleets plans, hubbing, growth forecasts, impact on fares and some operating expenses. The Commission is satisfied that this information is Qantas specific and of a commercially sensitive nature and has not released the submission.

### **Regional Airlines Association of Australia (RAAA)**

RAAA provided a brief submission to the Commission. The RAAA states that it notes and supports BARA's submission. RAAA also states that the proposed increases in charges for the use of Sydney Airport do not affect some regional airlines substantially and some not at all. However, RAAA also submits that with respect to those airlines using aircraft such as the Saab 340B and Dash-8 there is an increase imposed of between 5 per cent and 30 per cent proposed and states that in this instance the arguments in BARA's submission are relevant.

### **Impulse Airlines (Impulse)**

In its brief submission to the Commission Impulse states that it has no objections to the new price structure proposed by SACL and considers the increase to be reasonable. Impulse states it is also content with SACL's proposal to maintain the existing charge for small and medium regional aircraft (15-19 seats). Impulse states that it considers that the proposed minimal rise of airport charges on other larger aircraft types should not impact on overall domestic air travel demand or prices.

### **Australian Airports Association (AAA)**

The Commission received a brief submission from AAA. AAA states that it supports SACL's proposal. AAA states that it assisted Sydney Airport with the preparation of its proposal and

would not compromise its integrity with support for a proposal that did not meet AAA's approval.

#### **Australia Pacific Airports Corporation Ltd (APAC, Melbourne Airport)**

APAC submits that the building block approach, the dual till approach, the inclusion of land in the asset base, SACL's approach to depreciation and the distribution of assets between aeronautical and non-aeronautical are appropriate as applied by SACL. APAC submits that major Australian airports exhibit similar levels of operational efficiency and are efficient by world standards. APAC also argues an asset beta of 0.70 is appropriate for Sydney Airport, that there appeared to be no reason to object to the proposed structure of prices and that the price impact on end users is minimal.

#### **Brisbane Airport Corporation Ltd (Brisbane Airport)**

Brisbane Airport submits that the revised proposal provides the justification to adjust prices to a more economically efficient level, that the building block approach has been applied correctly by SACL and that the single till approach should not be considered as appropriate framework. Brisbane Airport also agrees in principle with the methodology adopted by SACL in estimating land values and that the DORC methodology was applied appropriately in estimating the value for non-land assets. Brisbane Airport indicates concern about the degree of regulatory intrusion involved in implementing the post-tax WACC. Brisbane Airport submits Sydney Airport's asset beta should be higher than other major airports and made recommendations as to the other WACC parameters.

#### **Capital Airport Group (Canberra Airport)**

Canberra Airport states that SACL has applied the building block approach to calculating the aeronautical asset base consistently with past approaches adopted by the Commission. Canberra Airport argues against the introduction of a single till for efficiency reasons. Canberra Airport submits land value should form part of an airport's asset base and should be calculated using an opportunity cost methodology. Canberra Airport supports the DORC methodology used in valuing assets. Canberra Airport also suggests that the Commission's past approaches to calculating the risk-free rate and the cost of debt did not adequately reflect costs borne by airport operators. Canberra Airport supports Sydney Airport's proposal to increase its charges.

#### **Westralia Airports Corporation (WAC, Perth Airport)**

WAC states in its submission that the building block approach used by SACL is consistent with the approach advocated by the Commission in the DRP.<sup>18</sup> WAC supports SACL in its arguments for inclusion of a value for aeronautical land and that this land value should be based on an opportunity cost methodology and arguments against the single till approach. WAC does not support SACL's decision to exclude ground access assets from the aeronautical asset base. WAC also considers there should be a pool of capital expenditure for

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<sup>18</sup> Australian Competition and Consumer Commission, (3) op. cit.

each airport to eliminate the need for review of minor individual projects. WAC supports use of an asset beta of 0.7 for Sydney Airport.

**Submission from the Hon John Anderson, MP, Deputy Prime Minister, Minister for Transport and Regional Services**

The Commission received a submission on 19 January 2001 from the Hon John Anderson, MP, Deputy Prime Minister and Minister for Transport and Regional Services. The submission outlines the Government's objectives in privatising the Federal airports, namely to improve the efficiency and flexibility in the way those airports were being managed and to foster a more commercial approach in their operation. It considers the principles in SACL's proposal reflect the Government's policy intent.

**Riverina Regional Organisation of Councils (RIVROC)**

The Commission received a brief submission from RIVROC. RIVROC states that it regards the continuation of timely and affordable access to Sydney Airport for regional air travellers to be an issue of vital importance for non-metropolitan residents. RIVROC has concerns that an inappropriate pricing regime could be used to force regional air services to Bankstown Airport, a move that RIVROC states it totally opposes.

**State Chamber of Commerce (NSW)**

The Commission received a brief submission from the NSW State Chamber of Commerce (NSWSCC). The NSWSCC states that Sydney Airport is Australia's most important piece of transport infrastructure, as it is the first point of entry for a substantial proportion of international visitors and is increasingly becoming an important freight transfer point for high value goods. The NSWSCC submits that past NSWSCC reports (1997) have found that the airport provided over 66,000 jobs and contributed \$5 billion in output directly to the New South Wales economy, and \$8 billion in flow-on effects. NSWSCC submits that the Airport's location provides ease of access to the CBD and that Sydney Airport performed efficiently during the Olympic period. The NSWSCC states that it supports Sydney Airport for its contribution to business and the role it provides in the business community.

## ■ Chapter 2: The regulatory framework

The following chapter sets out the regulatory framework applicable to notices submitted to the Commission under section 22 of the PS Act in relation to prices for aeronautical services at Sydney Airport, and the Commission's interpretation of that framework. It also discusses the principles underlying the Commission's approach to the application of the regulatory framework to SACL's proposals.

### 2.1 The regulatory framework applicable to the SACL proposal

In 1997/98, the Federal Government granted long term leases at eleven Australian airports as part of its airport privatisation program. These airports are 'core-regulated' airports and are subject to a comprehensive economic regulatory regime covering pricing, quality and access issues.

'Aeronautical services' at the privatised airports are subject to a CPI – X price cap. The price cap arrangements allow for pass through of additional costs in the form of increases in prices to fund 'necessary new investment'. The Commission has the role of assessing compliance with the price cap arrangements and assessing proposals for price increases from necessary new investments.

Sydney Airport is one of four Commonwealth owned airports in the Sydney Basin area that has not been privatised. In July 1998, these airports were transferred from the FAC to SACL.<sup>19</sup> SACL is, with respect to the provision of aeronautical services at these airports, subject to an economic regulatory regime similar to that applicable to the privatised airports. Like the privatised airports, aeronautical services at Sydney Airport are subject to prices surveillance under the *Prices Surveillance Act 1983* (PS Act). However, unlike the privatised airports, the airports operated by SACL are not subject to the CPI – X price cap arrangements.

#### 2.1.1 The Prices Surveillance Act 1983 (Cth)<sup>20</sup>

Part III of the PS Act provides the framework for the prices surveillance regime applicable to certain aeronautical services at Sydney Airport.

Under section 21(1) of the PS Act, the Minister (or the Commission with the approval of the Minister) may declare goods or services to be 'notified' goods or services and declare a person to be a 'declared person' for the purposes of the Act.

Pursuant to this section particular aeronautical services at Sydney Airport have been declared as notified services.<sup>21</sup> In relation to the provision of those services, SACL is a declared person

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<sup>19</sup> SACL has a mandate to manage and operate four airports in the Sydney Basin area including Sydney (Kingsford Smith), Bankstown, Hoxton Park and Camden airports: Sydney Airports Corporation Ltd, Annual Report 2000 at page 4.

<sup>20</sup> Copies of Sections 17, 21 and 22 of the PS Act may be found in Appendix A to this document.

<sup>21</sup> Declaration No 89, June 2000. Declaration No. 89 came into effect on 1 July 2000 and ceases on 1 July 2003. It replaced Declaration No. 85, which was in almost identical terms: Revocation No. 27. A copy of Declaration No. 89 is included in Appendix A.

for the purposes of the PS Act.<sup>22</sup> The notified services at Sydney Airport are the same as the aeronautical services that have been declared at the privatised airports.

Thus, SACL is required to notify the Commission of proposed increases in prices of the notified services at Sydney Airport.<sup>23</sup> SACL is prohibited from increasing prices unless, *inter alia*, the Commission serves a notice that it has no objection to a proposed increase.<sup>24</sup>

Subsection 17 (1) sets out the functions of the Commission under the PS Act. One of the functions of the Commission under the PS Act is “to consider notices given to it under paragraph 22 (2)(a) and to take into relation to such notices such action in accordance with [Part III of the PS Act] as it considers appropriate”.<sup>25</sup>

Subsection 17(3) of the PS Act provides:

In exercising its powers and performing its functions under this Act, the Commission shall, subject to any directions under section 20, have particular regard to:

- (a) the need to maintain investment and employment, including the influence of profitability on investment and employment;
- (b) the need to discourage a person who is in a position to substantially influence a market for goods and services from taking advantage of that power in setting prices; and
- (c) the need to discourage cost increases arising from increases in wages and changes in conditions of employment inconsistent with principles established by relevant industrial tribunals.

### **2.1.2 Ministerial Directions**

Pursuant to section 20 of the PS Act the Minister may direct the Commission to give special consideration, in exercising its powers and performing its functions under the PS Act, to certain specified matters, and the Commission is required to comply with such a direction.

Two directions relevant to the pricing of aeronautical services at Sydney Airport have been given to the Commission pursuant to section 20 – Direction No. 18<sup>26</sup> and the ‘Unit Cost’ Direction.<sup>27</sup>

#### ***Direction No. 18***

Direction No. 18 came into effect on 1 July 2000 and replaces Direction No. 15. Direction No. 15 was in substantially the same terms as Direction No.18, however, Direction No. 15 provided that the starting point prices for the declaration arrangements were the FAC prices approved as at 30 June 1998. This paragraph was not included in Direction No. 18.

Direction No. 18 requires the Commission to give special consideration to certain matters in assessing SACL's aeronautical pricing proposals. These are:

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<sup>22</sup> Ibid.

<sup>23</sup> Section 22(2), PS Act.

<sup>24</sup> Sections 22(1) and (2), PS Act.

<sup>25</sup> Section 17(1)(a), PS Act.

<sup>26</sup> Direction No. 18, June 2000.

<sup>27</sup> Direction by the Treasurer to the Prices Surveillance Authority (a predecessor to the Commission) dated 15 October 1985.

- (1) Quality of service information obtained under Part 8 of the *Airports Act 1996* may be taken into account by the Commission in considering notifications to increase prices for declared services.
- (2) The Commission is to use the following criteria to guide its assessment of proposals to increase charges for aeronautical services as a result of necessary new investment:
  - (a) the operator's plans for new investment or service innovation and the associated costs;
  - (b) the relationship between the proposed increases in aeronautical charges and the costs (including the level of the rate of return) of the new investment or service;
  - (c) support from airport users with a significant interest in the investment for the operator's proposals, including in relation to charging changes;
  - (d) contribution of the new investment/service to productivity improvements at the airport;
  - (e) overall efficiency of the airport's operation;
  - (f) the particular demand management characteristics of individual airports, including any demand management schemes in place, capacity constraints and any under utilisation of the airport infrastructure;
  - (g) airport performance against quality of service measures, including services under the control of the airport operator;
  - (h) airport performance vis a vis other Australian airports and any comparable international airports; and
  - (i) the extent to which the proposed investment will facilitate the operations of new entrants to domestic or international aviation.

While the Commission must take these criteria into account in deciding whether to approve a proposal to increase charges, in relation to new investment; each proposal will be considered on its merits having regard to the information available to the Commission. The weight provided by the Commission to each of the criteria may vary on a case-by-case basis.

The Commission will provide a statement of reasons for its determination.

### ***The Unit Cost Direction***

The Unit Cost Direction directs the Commission, in exercising its powers and performing its functions under the PS Act, to give special consideration, in addition to the matters set out in section 17 (3), to –

the Government's policy of generally not supporting price increases in excess of movements in unit costs.

### **2.1.3 Interpretation of the section 17(3) criteria**

As discussed in the Commission's draft statement,<sup>28</sup> the Commission interprets and applies the criteria in section 17(3) in the light of the current economic environment. The most significant of these in the context of the SACL proposals are the criteria set out in paragraphs (a) and (b) of section 17(3). Taking into account the Unit Cost Direction and the current economic conditions, the Commission considers that the following considerations are important in interpreting these criteria.

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<sup>28</sup> Australian Competition and Consumer Commission, (1) op cit.

In an open and competitive market economy efficient provision of services underpins investment and employment opportunity. Investment and employment in the national economy will be promoted when firms produce goods or services efficiently and charge prices which are at competitive levels.

Monopoly suppliers do not necessarily produce goods or services at efficient cost levels or at competitive prices. If higher than efficient prices are passed on to the competitive part of the economy, there is a resultant loss in allocative efficiency and potentially therefore in investment and employment opportunity.

Encouraging efficient pricing outcomes in line with more competitive conditions implies that price increases should not be in line with unit costs on top of a cost base which is too high due to inefficiency or excessive margins.

In this context, the Commission regards section 17(3) as requiring it to examine (a) the efficiency of the cost base that SACL is working from to earn a return; and (b) the reasonableness of the rate of return that SACL is seeking.

As discussed further below, the Commission does not regard Direction No. 18 as requiring a different approach in the assessment of the new investment component of the proposed price increases.

The Commission's approach to applying these criteria to the SACL proposal is discussed in more detail in section 2.2 below.

#### **2.1.4 Interpretation of Direction No. 18**

BARA argues that Direction No 18 "has a primacy as compared to the matters specified by section 17(3)".<sup>29</sup>

The Commission does not accept that interpretation. In the Commission's view the words 'subject to' in section 17(3) need to be interpreted in light of the general reluctance of the courts to adopt a construction of an Act that would empower the executive to override it by regulation or other subordinate instrument. Thus, the provisions of the two relevant Directions should be regarded as supplementing the section 17(3) criteria or clarifying their application in relation to particular circumstances, but not as detracting from them, or excluding or contradicting them.

In any event, it would not appear to be the intention of the Directions to contradict or exclude the application of the section 17(3) criteria. The requirement in section 20 of the Act and the Directions is to 'give special consideration to' the matters set out in the Directions. This implies that the Commission must give these matters particular (ie distinct) and real consideration as fundamental elements of its reasoning. But it does not evince an intention to override or conflict with the requirement of section 17(3) to have "particular regard" to the matters set out therein, nor an intention that the matters set out in the Directions should be given greater weight or significance.

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<sup>29</sup> Board of Airline Representatives of Australia, (1) *Submission to the ACCC on SACL's Draft Pricing Proposal*, November 2000, p. 44.

In the Commission's view the criteria set out in paragraph (2) of Direction No. 18 can be contrasted with those in section 17(3). The latter purport to express fundamental policy concerns or objectives. These are matters that the Commission is able to apply to evaluate the proposed prices for notified goods or services. That is, the application of these criteria to the circumstances of a particular proposal is susceptible of yielding an outcome.

In contrast, the matters referred to in paragraph (2) of Direction No. 18 do not establish any normative or qualitative standards against which the proposals can be assessed. They constitute a list of factual matters which the Commission is required to "use" or have regard to. They do not indicate the way in which these matters are to be evaluated, their relative weights or the significance to be attributed to those facts. They are thus not in the nature of criteria that can be applied to yield an evaluative outcome. As such, the Commission must apply a framework of evaluative criteria in order to be able to assess the factual matters referred to in paragraph (2) of Direction No 18.

In this light, the Commission does not regard Direction No. 18 as excluding the application of section 17(3) to the consideration of proposals to increase charges for aeronautical services as a result of necessary new investment. On the contrary, the section 17(3) criteria constitute a fundamental part of the analytical framework that the Commission applies to its evaluation of the matters referred to in the Direction.

### **2.1.5 Interpretation of the Unit Cost Direction**

BARA argues that the Unit Cost Direction is applicable to the assessment of existing investment. As a result it argues that the Commission should give close consideration to whether movements in unit costs since 1998 in relation to the pre-existing asset base justify the proposed increases in prices. It also argues that the policy expressed in that Direction should give way to the extent to which the prices for existing investments are based on an inefficient cost base.

SACL does not comment on the Direction in its submission. Similarly the issue is not raised in the other submissions received by the Commission.

The Unit Cost Direction is a statement of general policy. While the Commission is obliged pursuant to section 20 of the PS Act to give special consideration to this policy, that consideration must yield in an individual case where to apply that policy is regarded by the Commission as outweighed by other considerations particular to the pricing proposal.

The Commission considers that, in the context of the SACL proposal, while the Unit Cost Direction remains a relevant consideration, it is appropriate to focus on market power issues and the need to maintain investment rather than movements in unit costs per se. Such an approach more adequately allows the Commission to ensure that the objectives of the statutory regime are achieved. The Commission also notes that this is consistent with the approach adopted in the Commission's draft statement, which focuses on the efficiency of the cost base and the reasonableness of returns.

### **2.1.6 Whether the statutory criteria are exhaustive**

BARA argues that the matters set out in section 17(3) and the Directions are exhaustive; ie. are the only matters that the Commission may take into consideration when assessing the



SACL proposal. The Commission does not agree. In the Commission's view the various instruments do not purport to prevent the Commission from taking into account other matters not specifically identified in the instruments if such matters are relevant to the assessment of the proposal, and provided that priority is given to the matters set out in section 17(3) and the Directions.<sup>30</sup>

## **2.2 Commission's approach to application of the regulatory framework**

### **2.2.1 Background**

The Commission's task, in exercising its powers under section 22 of the PS Act, is to determine whether or not the prices proposed by SACL are appropriate, and if not whether specified lower prices would be appropriate. As discussed above, in exercising that discretion it must take into account the matters referred to in section 17(3) of the PS Act and the Directions, in accordance with the terms of those instruments, and any other relevant matters.

In order to exercise its powers effectively, the Commission has considered it appropriate and useful to formulate clearly its objectives in exercising its discretion. This has been considered important to enable the Commission to apply those criteria to the SACL proposal in a consistent manner. In formulating these objectives, the Commission has sought to ensure that they are consistent with the scope, subject matter and purpose of the Commission's powers under the PS Act and in particular promote the policy concerns expressed in section 17(3) of the PS Act.

The intentions of the Government in implementing the regulatory framework applicable to core regulated airports were summarised in the pricing policy paper:<sup>31</sup>

Pricing oversight arrangements are intended to promote operation of the airports in as an efficient and commercial manner as possible. Pricing is fundamental to the efficient use of airport infrastructure. It is in the interests of airport users in particular, and the national economy in general, that commercially driven decisions be made about maintaining existing airport infrastructure, and building new infrastructure.

The arrangements should also aim to protect airport users from any potential abuse of market power by airport operators. Market power stems from the fact that airports have natural monopoly characteristics.<sup>32</sup>

In the case of Sydney Airport, pricing oversight arrangements take the form of prices surveillance of aeronautical services under section 21 of the PS Act, and prices monitoring of aeronautical-related services under section 27A of the PS Act. Subject to the relevant Directions, the criteria relating to aeronautical charges are those set out in subsection 17(3) of the PS Act. The Commission's view is that the following criteria are particularly relevant in evaluating SACL's proposal:

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<sup>30</sup> That such priority must be given is suggested by the words "particular regard" in section 17(3) and "special consideration" in section 20 of the PS Act and the Directions. Whatever the difference between these terms, they appear to require the Commission to give real consideration to all of them as fundamental elements of its analysis.

<sup>31</sup> Although the pricing policy paper related mainly to the price cap arrangements in place for the major privatised airports, the rationale behind regulation is the same for all the major Australian airports.

<sup>32</sup> Department of Transport and Regional Development, op cit., p. 1.

17(3)(a) the need to maintain investment and employment, including the influence of profitability on investment and employment;

17(3)(b) the need to discourage a person who is in a position substantially to influence a market for goods and services from taking advantage of that power in setting prices.<sup>33</sup>

As discussed above, the Commission has previously documented its approach to interpreting and applying these criteria in the draft statement. The draft statement concludes that, in assessing price notifications, the criteria set out in section 17(3)(a) and (b) are best assessed by an examination of the extent of:

- the efficiency of the cost base that the declared company is working from to earn a return; and
- the reasonableness of the rate of return that the declared company is seeking.

For the reasons set out above and in chapter 3, the Commission does not consider that the specific circumstances of Sydney Airport (in particular the application of Direction No. 18 and the Unit Cost Direction) require the Commission to depart from this basic approach.

Furthermore, in its DRP, the Commission has expressed an approach to regulation, which it regards as consistent with the objectives and terms of the regulatory regime applicable to Sydney Airport.

In assuming its role as the national regulator of transmission revenue in the NEM, the Commission's aim is to adopt a regulatory process which eliminates monopoly pricing, provides a fair return to network owners, and creates incentives for managers to pursue ongoing efficiency gains through cost reductions.<sup>34</sup>

The Commission is of the view that in the interests of regulatory consistency it is desirable, in the context of airports regulation, to give effect to the principles set out in the DRP, to the extent to which that is appropriate and does not conflict with the scope and purpose of that legislative regime. The Commission is of the view that the pursuit of these principles is an appropriate way of ensuring that the policy objectives expressed in the section 17(3) criteria are met.

As a step towards achieving the objectives set out in the DRP, the DRP specified the Commission's preferred model for the calculation of allowable revenues as an accrual building block approach based on forecasts of the cost of service over the regulatory period. The building block model is described, and the appropriateness of its application to the SACL proposal is discussed in more detail in chapter 3. Accordingly, the Commission considers that, unless there are good reasons to the contrary, it is preferable to adopt a building block approach to the assessment of the efficiency of the cost base underlying proposed prices and the reasonableness of the rate of return being sought.<sup>35</sup>

A further important consideration with respect to the need to maintain investment is the consistency of regulatory approach over time. In 1998 the Commission considered a notification by the FAC for increases in aeronautical charges at Sydney Airport. The FAC's

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<sup>33</sup> Section 17(3), PS Act.

<sup>34</sup> Australian Competition and Consumer Commission, (3) op cit, p.ix.

<sup>35</sup> This approach would not be appropriate for the assessment of pricing proposals by declared persons subject to price caps, such as the privatised airports. See generally the draft statement.

proposals were in part driven by the additional costs of new investments being undertaken in the lead up to the Olympics.

In its decision on the FAC's proposals the Commission stated:

The Commission is not in a position to make a decision at this point in time regarding the proposals for the second and third years for the reasons set out below. However, the Commission recognises that investment expenditure at Sydney airport is required and undertakes to allow increases in charges for aeronautical services sufficient to justify the investment. The extent to which increases in charges are justified will depend upon resolution of issues relating to depreciation charges and rate of return and a review of traffic forecasts, capital expenditure incurred and other relevant variables.<sup>36</sup>

The Commission stands by this undertaking. In doing so its aims to provide, as far as possible, consistency in regulatory approach over time. In the absence of such consistency, there may be risks in terms of investment incentives for regulated firms. In this case the FAC and SACL undertook substantial new investments on the understanding that they would be compensated for the costs involved.

In its 1998 decision the Commission also noted that relevant principles for assessing the FAC's proposals were to consider whether or not the new charges will send appropriate pricing signals for efficient use of airport services and appropriate signals for new investment decisions.<sup>37</sup> Again, regulatory consistency suggests that the current proposal should be evaluated with these principles in mind.

SACL's revised proposal represents, in part, an increase to cover the cost of capital expenditures included in the FAC's proposals. Accordingly, the Commission considers it appropriate to allow an increase in aeronautical charges to, at a minimum, the extent to which they are justified by the investment referred to in the 1998 decision. In keeping with the draft statement, the Commission's 1998 decision indicated that a detailed assessment of SACL's cost base, including asset values and depreciation, is required.

### **2.2.2 Commission's objectives**

In light of the foregoing, the Commission considers that as far as possible its assessment of the SACL proposed price increases should seek to promote the objectives set out below. The Commission considers that these objectives facilitate the application of the legislative framework, and are consistent with the Commission's stated position in the draft statement, the approach outlined in the DRP, the 1998 decision on aeronautical charges at Sydney Airport, and its recent decisions in relation to aeronautical services at Sydney and other airports.

The Commission's objective is, as far as possible, to ensure that the prices for aeronautical services at Sydney Airport reflect the following principles:

- the cost base underlying the proposed charges is efficient;
- the airport operator faces appropriate signals for efficient new investment decisions;
- airport users receive appropriate signals for the efficient use of airport services; and

<sup>36</sup>Australian Competition and Consumer Commission, (2) op. cit., p. 1.

<sup>37</sup>Ibid, p. 2.

- the airport operator earns a reasonable rate of return which does not reflect monopoly rents.

The objectives encourage economically efficient use of, and investment in airport infrastructure. They address the following three elements of efficiency:

- *Dynamic efficiency*, which occurs when firms have appropriate incentives to invest and innovate over time.
- *Productive efficiency*, which occurs when firms have the appropriate incentives to produce services at least cost.
- *Allocative efficiency*, which occurs when firms employ resources to produce goods and services that provides the maximum benefit to society. Allocative efficiency means that infrastructure should not be under- or over utilised.

The first and last of the objectives (efficiency of the cost base and level of returns) reflect the terms of the criteria set out in section 17(3)(a) and (b) of the PS Act and follow the approach adopted in the Commission's draft statement. They are directed towards achieving productive and allocative efficiency.

The second objective (appropriate signals for new investment) follows from the terms of section 17(3)(a) of the PS Act and Direction No. 18. It addresses the requirements of dynamic efficiency.

The third objective (signals to users for efficient use of airport services) follows from section 17(3) of the PS Act and is directed to the efficiency of SACL's cost base. Effective utilisation of infrastructure reduces the need for unnecessary investment.

## ■ Chapter 3: Methodology - the building block approach

### 3.1 Introduction

As outlined in chapter 1, SACL uses a building block approach to derive the proposed aeronautical charges. The building block methodology is essentially a ‘bottom up’ approach to pricing based on forecasts of the cost of the service over the regulatory period. Total maximum allowable revenue is calculated as the sum of the return on capital, return of capital (i.e. depreciation allowance) and operating and maintenance expenditure.

Prices are then set so that revenue projections based on projected traffic units (MTOW, passengers etc.) are less than or equal to the maximum allowable revenue.

In its regulatory decisions to date the Commission has consistently applied the building block approach as a forward-looking concept, considering projected efficient costs rather than historical costs. In the Commission’s recent Adelaide Airport MUIT decision,<sup>38</sup> for example, the O&M costs used for purposes of that decision were based on the estimated costs of contracting out the O&M functions. Similarly, in using the ODRC methodology the Commission takes into account expected capital redundancy over the relevant regulatory period.<sup>39</sup>

In using the building block approach SACL has sought to apply the approach set out in the DRP.<sup>40</sup> The approach is also consistent with that adopted by the Commission in its recent decisions on price increases for new investments proposed by Adelaide, Brisbane and Perth Airports.<sup>41</sup>

BARA and others have submitted that the application of the building block methodology to the pricing of aeronautical services at Sydney Airport is both contrary to the legal framework and inappropriate on economic grounds.

This chapter considers the principles behind the building block approach. Section 3.2 considers the consistency of the use of this methodology with the regulatory framework, drawing on SACL’s proposal and submissions to the Commission. Section 3.3 considers the

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<sup>38</sup> Australian Competition and Consumer Commission, (5) op cit.

<sup>39</sup> See the discussion in Chapter 4 of the Commission’s DRP. As an example of the Commission’s application of the optimisation approach see the Commission’s publication *Australian Competition and Consumer Commission Final Decision: Access Arrangements by Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia (Assets) Pty Ltd for the Principle Transmission System; Access Arrangements by Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia Pty Ltd for the Western Transmission System; Access Arrangements by Victorian Energy Networks Corporation for the Principle Transmission System*, October 1998.

<sup>40</sup> Australian Competition and Consumer Commission, (3) op cit.

<sup>41</sup> See Australian Competition and Consumer Commission, (5) op cit; Australian Competition and Consumer Commission, (7) *Brisbane Airport: Proposal to increase aeronautical charges to recover the costs of necessary new investment*, April 2000; Australian Competition and Consumer Commission, (8) *Perth Airport: Proposal to increase aeronautical charges to recover the costs of necessary new investment*, April 2000.

economic merits of the approach in setting prices at Sydney Airport. The Commission's approach to the building block methodology proposed by SACL is set out in section 3.4.

### **3.2 Consistency of the building block methodology with the regulatory framework applicable to Sydney Airport**

SACL states that it considers that the overall approach adopted is consistent with both the Directions and section 17 of the PS Act.

BARA's submission raises a number of concerns about the approach adopted by SACL. The other submissions do not explicitly comment on the consistency of SACL's approach with the regulatory framework.

BARA contends that SACL's methodology, and its application of that methodology, are inconsistent with the regulatory framework. BARA's principal arguments can be summarised as follows:

- SACL's application of the building block methodology does not separate out the costs and revenues associated with existing assets/investment from those associated with new investment. On the contrary the regulatory framework requires a separate assessment of the latter;
- Consistency of regulation across the leased airports requires that the price increases relating to pre-existing aeronautical investments be assessed having regard to:
  - the current commercial return being earned by SACL in respect of the existing investment;
  - movements in unit costs since prices were last determined; and
  - the efficiency of the pre-existing cost base.

According to BARA the application of the building block methodology by SACL gives insufficient regard to these matters;

- SACL's application of the building block methodology involves separating aeronautical costs and revenues from non-aeronautical costs and revenues (dual till). On the contrary, the regulatory framework requires a single till methodology;
- To the extent that SACL's use of the building block methodology in its revised proposal does not contain sufficient information in order to address the criteria set out in the regulatory framework (ie Direction No. 18, the Unit Cost Direction and section 17(3)), the proposal should be rejected by the Commission; and
- Direction No. 18 requires the Commission to have regard to quality of service issues in assessing pricing proposals. SACL has not adequately demonstrated that it is providing adequate service standards.

This section considers each of BARA's concerns. Section 3.2.1 reviews the arguments for separate consideration of new and existing investments and the application of the necessary new investment criteria. Section 3.2.2 considers the approach to the assessment of the "pre-existing assets". Cost allocation issues are discussed in section 3.2.3. Section 3.2.4

considers the arguments in relation to sufficiency of information. Quality of service issues are dealt with in section 3.2.5.

### 3.2.1 Separate assessment of “pre-existing” and “new” investments

SACL’s pricing proposals cover assets and services in place at the time of the last price notification (made by the FAC in 1998). The proposals also relate to around \$500 million in investments undertaken or completed since then. The investments comprise the SA2000 program and associated projects. These projects appear to be ‘new investments’ to the extent that they:

- significantly alter the firm’s capacity, making significantly larger quantities of output more physically and/or economically feasible; and/or
- attain net enhancements in quality, that is, result in an improvement in quality over and above the pre-existing peak standard of quality at the airport.<sup>42</sup>

Roughly one half of the price increases proposed relate to existing assets, the other half to recovery of costs associated with the new investments.

SACL’s proposal does not specifically separate new from existing assets or separately address the criteria set out in paragraph (2) of Direction No. 18 in relation to the new investment aspects of the proposal. SACL argues that this is not required by the legislative framework and would in any event be of little benefit. At the Commission’s request, however, SACL has provided the Commission with a discussion of how it believes the criteria are met by the proposal.

In relation to the legal framework SACL argues that:

SACL understands that the NNI criteria, and their interpretation by the Commission, are based significantly on the understanding that was assumed to exist between the Commonwealth and bidders for Phase 1 and Phase 2 airports.

In the case of price capped privatised airports, the Commonwealth made it clear that the airports were offered for lease on the basis that a CPI-X price cap would apply for the first five years, predicated on the then prevailing FAC prices. Accordingly, the prices tendered by potential bidders factored in cash flows at that level. It was only the mutual desire of the Commonwealth and successful tenderers to support new investment and thereby enhance service capacity and levels that required any specific provision to allow investment-related price increases.<sup>43</sup>

SACL goes on to argue:

...the NNI criteria have only limited application to the Revised Draft Proposal. SACL seeks to establish a reasonable pricing base for Sydney Airport following a history of network based pricing and under-recovery of aeronautical investment, originally by the Commonwealth and, most recently, by the FAC.<sup>44</sup>

BARA, by contrast, argues that the regulatory framework requires the Commission to consider and assess separately (a) the price increases to the extent to which they relate to

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<sup>42</sup> For more details on the concept of ‘new investment’ see the Commission’s new investment position paper. The paper provides guidance on its interpretation of what constitutes ‘necessary new investment’. It is available on the Commission’s website at <<http://www.accc.gov.au>>.

<sup>43</sup> Sydney Airports Corporation Ltd, (2) op cit, p. 26.

<sup>44</sup> Ibid, page 27.

pre-existing aeronautical investments, and (b) the price increases to the extent to which they relate to new aeronautical investments.

In relation to pre-existing assets, BARA argues that the Unit Cost Direction and the requirements of section 17(3) of the PS Act mean that the Commission should have regard to the following in assessing the price increases:

- the commercial return currently being achieved by the airport operator;
- movements in unit costs since prices were last determined; and
- the efficiency of the pre-existing costs base.

In relation to new investments, BARA argues that the Commission is required to assess the proposal in so far as it results from necessary new investments in accordance solely with the terms of Direction No. 18.

The strict separation of the assessment of pre-existing and new investment is central to BARA's approach.

The Commission accepts that, notwithstanding the differences between the regimes applicable to Sydney Airport and those applicable to the privatised airports (in particular the existence of a price cap for the latter but not the former), the existence of paragraph (2) of Direction No. 18 indicates a clear intention of the regime that "price increases may be justified by necessary new investment, in order to create incentives for that investment"<sup>45</sup>. This means that the matters referred to in paragraph (2) of the Direction concerning the increase in prices resulting from incremental new investments should be given particular and explicit consideration. Indeed, the words of Direction No. 18 clearly indicate that the Commission is required to use the matters referred to in paragraph (2) when assessing the component of the proposed price increases that result from necessary new investment.

However, while it accepts that such an analysis must be carried out, it is of the view that the instruments do not require a methodology for the assessment of the Sydney proposals that strictly separates the assessment of pre-existing and new assets. In particular, provided the Direction No. 18 matters are explicitly addressed and taken into account, it does not prevent the application of a methodology that applies to both new and existing investments.

BARA's interpretation of the regime relies to some extent on its contention that Direction No. 18 has a "primacy" over the section 17(3) criteria and alone governs the assessment of necessary new investment. As set out above, the Commission does not agree with this contention.

Further, for the reasons set out in chapter 2, the Commission also does not consider that Direction No. 18 excludes the application of the section 17(3) criteria to its assessment of necessary new investments. On the contrary, the section 17(3) matters remain fundamental to the assessment, having regard to Direction No. 18, of the new investment component of the proposed prices.

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<sup>45</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 44-46.



The Commission notes that it may be appropriate to consider the new investment component of price increases solely in terms of Direction No. 18 where no fundamental assessment is sought to be made of the underlying cost base and the new investments are truly prospective. This was, for example, the case with respect to the Commission's decision in May 2000 concerning the Domestic Common User Terminal at Sydney Airport.<sup>46</sup>

The case of SA2000, however, is in the Commission's view significantly different from new investments that underlie proposals to the Commission for price increases on a forward-looking basis. In assessing SACL's proposal, the Commission cannot regard the SA2000 investments as truly forward-looking. At least a substantial part of those investments had been committed to prior to the transfer of the airport to SACL, following a public consultation process in which users were involved.

The Commission notes that, in its decision of May 1998, reference was made to the need to assess matters such as depreciation charges and rate of return. This implies that it is not appropriate to undertake a detailed analysis of those investments in isolation from the fundamentals of the existing prices.

The Commission considers that the adoption of a building block methodology to the whole of the assets used to provide aeronautical services (i.e. existing and new assets) is not inconsistent with a separate consideration of the new investment component of the proposed price increases under Direction No 18. In fact, as its decisions in relation to the new investment proposals by Adelaide, Perth and Brisbane Airports demonstrate, the building block approach may be an appropriate methodology for addressing the matters referred to in paragraphs (2)(a) and (b) of that Direction.

Even where the building block methodology is applied to all assets together, it ensures (primarily through the optimisation of the capital base) that only efficient new investment costs are incorporated into the cost base underlying the prices, and that a reasonable return is attributed to those costs. This therefore ensures an adequate assessment of the matters referred to in paragraphs (2)(a) and (b) of that Direction. This is discussed further in chapter 6.

Of course, the matters set out in paragraph (2) of Direction No. 18 that do not relate to the assessment of costs and returns need to be given particular consideration outside the application of the building block methodology. These issues are also addressed in chapter 6.

Accordingly, the Commission has regarded it as appropriate to incorporate the SA2000 investments in its building block methodology. In this way, the efficiency of the SA2000 investments and the reasonableness of the rate of return earned on them are incorporated into the assessment of these issues for the aeronautical assets at the airport as a whole. At the same time, it considers it appropriate to undertake, by way of a particular and parallel assessment, a consideration of the price increase proposals in so far as they result from new investment in accordance with the criteria set out in paragraph (2) of Direction No. 18. The results of the application of the building block approach are regarded as relevant

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<sup>46</sup> Australian Competition and Consumer Commission, (9) *Sydney Airport: Domestic Common User Terminal – New investment decision*, May 2000.

considerations in assessing the matters referred to in paragraphs (2)(a) and (b) of the Direction. The results of the assessment under Direction No. 18 are set out in chapter 6.

### **3.2.2 Approach to the assessment of existing assets**

With respect to “existing” assets, BARA appears to suggest that the Commission’s initial focus should be on the existing situation with respect to the pricing of aeronautical services at Sydney Airport. In summary, BARA appears to argue that the Commission should only consider it appropriate to accept a pricing proposal based on a new methodology applicable to the existing asset base if it is satisfied that:

- the existing prices for aeronautical services at Sydney Airport have been demonstrated to be inefficient or otherwise flawed on economic grounds ; and
- the proposed methodology adequately addresses those efficiency concerns.

The result of this approach would be to place the onus on SACL to satisfy the Commission of the economic need to adopt a new methodology to the derivation of prices, and the appropriateness of the proposed methodology and price structures to meet that need.

This view does not appear to go so far as to argue that the Commission should take the existing prices (and price structures) as given, or that (notwithstanding the deletion of paragraph (1) of Direction No 15) Sydney Airport is to be treated effectively as being subject to a price cap. BARA concedes that the Commission is allowed (indeed is required) to assess the efficiency of the existing cost base and the level of returns currently being achieved.

On the other hand, BARA argues that the Commission is not entitled simply to “re-open existing prices”.<sup>47</sup> This is because the existing prices allow SACL a reasonable return; “that is, current aeronautical charges are sufficient to maintain and replace existing assets, cover efficiently incurred operating expenses, and to provide a service of at least equal quality to that provided by the FAC prior to the commencement of the Project”.<sup>48</sup> Accordingly, there is no demonstrated justification for the price adjustments in respect of pre-existing assets.

The main arguments raised by BARA in support of its contentions are that such an approach “is both appropriate from an economic perspective, and maintains consistency in the regulatory approach in respect of Australian airports”.<sup>49</sup> As to the latter, it argues that, even though no CPI-X price cap is applicable at Sydney Airport, the same regulatory approach [should be taken] to Sydney Airport as for the privatised airports.

In the Commission’s view the applicable instruments do not as a matter of law prohibit the Commission from “re-opening” the existing prices, and adopting an appropriate methodology to ascertain whether or not the proposed prices reflect an efficient cost base and a reasonable return on assets.

The Commission’s task under section 22 of the PS Act is to decide whether or not to object to the proposed prices. The increase in prices is the trigger, but not the subject matter, of

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<sup>47</sup> Board of Airline Representatives of Australia, (1) op cit, p. 59.

<sup>48</sup> Ibid, p. 59-60.

<sup>49</sup> Ibid, p. 108.

the Commission's consideration. It is clearly a relevant consideration, as part of this analysis, for the Commission to consider whether the *existing* prices are inefficient. However, it would not be correct to state that the Commission is required, as a matter of law, to first be satisfied that the existing prices are economically flawed before it is entitled to accept and apply a different methodology for determining what would be efficient prices for the relevant services than the methodology that has been used in the past to derive the existing prices.

For the reasons set out in chapter 2, the Commission has not regarded it as appropriate to place significant emphasis on the movements in unit costs of aeronautical services since the last price notifications in 1998.

### **3.2.3 Cost classification and allocation as 'aeronautical' and 'non-aeronautical'**

BARA states:

The criteria to be applied by the ACCC in assessing SACL's proposed price increase as a result of necessary new investment are:

Is the asset used to provide a declared service under Declaration 89?

If the asset is used to provide aeronautical and non-aeronautical services, has the asset value been appropriately allocated?

Is the project [ie SA2000] "new investment" under Direction No. 18, as interpreted by the ACCC's Position Paper on New Investment Costs Pass-through and applied in previous ACCC decisions? and

What is the appropriate increase in charges relating to any new investment, taking into account the criteria in paragraph 2 of Direction No. 18?<sup>50</sup>

Underlying BARA's submission is the contention that only "aeronautical" costs should be the subject of consideration under Direction No. 18. BARA's arguments in support of this approach are set out at various places in the submission. A summary of those arguments appears at paragraph 9.1.1:

Only those assets that are used to provide aeronautical services under Declaration 89 should be taken into account in determining an increase in aeronautical charges as a result of new investment. As charges for other services may be imposed without requiring ACCC notification, and may now or in the future be the subject of a separate revenue stream such as check-in counter use,[sic] the inclusion of assets not covered by Declaration 89 is therefore likely to result in SACL double-dipping between aeronautical charges and other revenue streams.

Clearly, a new investment that does not relate to the provision of aeronautical services could not be relied upon as justification for an increase in the charges for those services.

However, it is not apparent from the legislative instruments, in particular Direction No. 18, that the Commission is required to pass-through only that component of the new investment that reflects the use of the asset for the provision of aeronautical services. Paragraph (2)(b) of that Direction requires the Commission to have regard to:

the relationship between the proposed increases in aeronautical charges and the costs (including level of rate of return) of the new investment or service.

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<sup>50</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 72.

This suggests that there must be some relationship between the costs of the new investment and the increase in charges. That does not necessarily mean that the costs of the investment must be wholly attributable to the provision of the services to which the charges relate. It can be argued that other criteria referred to in paragraph (2) of Direction No. 18 require the Commission to have regard to the effects of the investment on the provision of other services at the airport. For example, the Commission must have regard to:

- (a) contribution of the new investment/service to productivity improvements at the airport;
- (b) overall efficiency of the airport's operations;
- (c) ...
- (d) airport performance against quality of service measures, including services not directly under the control of the airport operator.”

These issues are discussed further in chapters 4 (Dual Till) and 8 (Allocation of Capital Costs).

### **3.2.4 Sufficiency of information**

Deficiency of information is raised in BARA's submission. BARA argues generally that the inadequacy of information provided by SACL requires the Commission to reject the use of the building block methodology. The Commission has assessed this issue in the context of each of the matters that it has taken into account in assessing the SACL proposals. The ultimate question is whether it is “appropriate” to object or not object to the proposed prices.<sup>51</sup> Clearly, where less information is available it has been more difficult for the Commission to reach an informed view about the matter concerned. While the Commission is unable to make a finding as to the existence of a fact where there is no evidence to support that finding, it is a matter of judgment in each case as to whether it has sufficient information on which to base its views.

In the current case there are a number of matters in relation to which the Commission has received less information, or information of a lower quality, than would ideally be desirable. In each case the Commission has formed a view that it considers appropriate in the light of the information available to it. Indeed, in relation to necessary new investment that is the approach envisaged by Direction No. 18. However it is not of the view that this deficiency alone justifies objection to the proposals.

### **3.2.5 Quality of service**

Direction No. 18 makes two references to quality of service issues.

Paragraph (1) of Direction No. 18 states:

Quality of service information obtained under Part 8 of the Airports Act 1996 may be taken into account by the Commission in considering notifications to increase prices for declared services.

This allows (but does not oblige) the Commission to have regard to certain quality of service information, both in relation to new investment and existing services.

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<sup>51</sup> Section 17(1)(a), PS Act.

Paragraph (2)(g) of Direction No. 18 requires the Commission to have regard to “airport performance against quality of service measures” in its assessment of proposals to increase charges as a result of necessary new investment.

SACL acknowledges the importance of quality of service in its pricing proposal, stating “[t]he quality of the services and facilities provided are an important part of the value received by airline customers and travellers using Sydney Airport”.<sup>52</sup> As part of its proposal SACL comments on passenger surveys of quality of service conducted in 2000.

In its submission BARA places significant emphasis on the need for the Commission to take into account quality of service issues. These arguments are more fully set out in paragraphs 7.6 and 7.7 and chapter 12 of the BARA submission. Other submissions do not comment on quality in relation to the operation of the regulatory framework.

Quality of service issues are clearly relevant to the matters raised by section 17(3) of the PS Act and are discussed in chapter 6. In considering these issues the Commission notes that Direction No. 18 does not restrict or compel the Commission to take quality of service information into account in any particular way.

In the Commission’s view the adoption of the building block methodology does not prevent the Commission from taking adequate account of quality of service issues in accordance with the regime.

### **3.3 Application of the building block approach to Sydney Airport**

Most of the submissions comment on SACL’s application of the building block approach.

Submissions from IATA and British Airways comment on a number of aspects of SACL’s application of the building block approach, including the dual till approach to pricing, the asset base and the rate of return. These are considered in chapters 4, 5 and 10 respectively.

Submissions from Australia Pacific Airports Corporation (Melbourne Airport) and Brisbane, Canberra, Perth Airports also comment on these issues. Each of the submissions argues that SACL’s application of the building blocks approach is consistent with the Commission’s DRP. Their detailed comments are also considered in chapters 4, 5, and 10.

The airport operators’ submissions also comment more generally on the building block approach, questioning its appropriateness in regulating airports. Brisbane Airport, for example comments:

More generally, we note that rather than using the building blocks as one source of information about an outcome, regulators implement this approach by making it the outcome. This being the case regulators have become increasingly focussed on:

- Business costs, rather than customer outcomes and prices; and
- The collection of detailed information concerning business inputs and costs with little, if any, long term vision provided to industry and consumers about requirements for prices and the quality of other customer outcomes.

Notwithstanding intentions of light-handed, incentive based regulation, the implementation of a building block approach often provides to all intents and purposes, input focused or cost based

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<sup>52</sup> Sydney Airport Corporations Ltd, (2) op cit, p. 12.

regulation. In the long term, it is Brisbane Airport's belief that cost based regulation is unlikely to be in the best interests of industry, investors or customers.<sup>53</sup>

In making these comments the airport operators do not seem to oppose the approach taken by SACL. Nevertheless they seem to raise concerns about the Commission's DRP, and in particular what they see as a cost-based rather than incentive-based approach to setting prices.

BARA's submission contends that the building block methodology is inappropriate for Sydney Airport. In support of this position it makes the following main arguments:

- Unlike the electricity and other industries, in the context of Sydney Airport the building block methodology would be applied in the absence of a revenue cap. BARA state that:

This is particularly important given the significant growth in traffic at Sydney Airport. Under SACL's proposal its revenues will grow in proportion to growth in traffic resulting in significant over-recovery of costs. The importance of traffic forecasts and SACL's refusal to provide these forecasts to BARA is noted.<sup>54</sup>

- There are inadequate safeguards for such a methodology. BARA refers, for example, to chapter 10 of the Commission's DRP which deals with the problems of information asymmetry and the need for adequate information disclosure requirements.
- The building block approach is being used to address the wrong economic question. It appears to be used to estimate the costs of a hypothetical new market entrant (ie. the costs of by-pass). This is irrelevant at Sydney Airport where new entry is not viable and the prices for aeronautical services will not affect any build-buy decisions. On the contrary the economic issues to be addressed are whether the prices at Sydney Airport encourage efficient investment in aeronautical and non-aeronautical assets, and the efficient operation of the airport. BARA argue that:

The appropriate approach to address these issues is to determine aeronautical charges to recover the minimum efficient costs to continuing to provide aeronautical services, including the cost of necessary new investment. This differs significantly to the costs of by-pass underlying SACL's building block approach.<sup>55</sup>

- The SACL proposal would not be sustainable without the use of market power.
- SACL's model will not deliver the economic benefits it claims.

BARA's arguments raise legitimate concerns in relation to SACL's pricing proposal and are considered in the context of the Commission's assessment of the application of the building block approach in Chapters 4 to 10.

In relation to the general comments made by airport operators about cost based pricing, the Commission notes that it is on record as supporting incentive based regulation<sup>56</sup>.

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<sup>53</sup> Brisbane Airports Corporation Ltd, *Response to the ACCC on the Sydney Airport revised Draft Aeronautical Pricing Proposal*, November 2000, p. 3.

<sup>54</sup> Board of Airline Representatives of Australia, (1) op cit , p. 110-111.

<sup>55</sup> Ibid.

<sup>56</sup> See, for example, the Commission's submission to the Productivity Commission's Public Inquiry into the National Access Regime. A copy of this submission is available on the Productivity Commission's website at <<http://www.pc.gov.au/inquiry/access/subs/sublist.html>>.

Furthermore it is the Commission's view that the building block approach adopted in the DRP is consistent with an incentive-based approach to pricing. The approach establishes a starting point for a allowable revenue for electricity transmission services. In relation to Sydney Airport the current regulatory framework does not establish a price cap, though this is likely to be considered by the Government in the lead up to privatisation, and the Productivity Commission in its review of airport regulatory arrangements. If a price cap is established it seems likely that the prices introduced by SACL pursuant to this decision by the Commission would form the starting point for the cap.

### **3.4 Commission draft decision**

In the light of the foregoing, the Commission considers it appropriate to apply a building block methodology to the assessment of SACL's pricing proposals. This methodology should apply to all assets used for the provision of aeronautical services, including the SA2000 investments. In addition, a particular assessment of necessary new investments should be carried out in accordance with the terms of Direction No. 18. This assessment should incorporate the results of the building block approach where relevant to the matters referred to in Direction No. 18.

The Commission's draft decision is not to object to SACL's use of a building block approach. This does not necessarily mean that the Commission accepts the way in which SACL applied the approach in its proposals and that there are not issues related to its application that need to be addressed. In its draft decision the Commission assessed the details of SACL's application of the building block approach. The outcome of this assessment is discussed in Chapters 4 – 10 of this paper.

## ■ Chapter 4: Dual till

### 4.1 Introduction

There are two basic methodologies that can be applied to the determination of the rate of return applicable to the provision of aeronautical services. The ‘dual till’ approach to pricing conceptually separates the aeronautical from the non-aeronautical functions of an airport. It identifies those costs involved in the provision of aeronautical services and uses them as the basis for setting aeronautical charges. This approach necessitates an identification of those services considered as aeronautical, along with an allocation of the costs that are common to aeronautical and non-aeronautical functions. For aeronautical services, the dual till approach requires that revenues cover the directly attributable costs of providing these services, including an appropriate return on assets that are used solely for these services, as well as a contribution to costs that are common to both aeronautical and non-aeronautical services.

By contrast under a single till approach to pricing, airport revenues are determined by setting an appropriate rate of return on all assets that are used for the provision of all services at the airport. Total costs of the whole airport are calculated, along with non-aeronautical revenues. Aeronautical prices are then set as a residual to meet a rate of return target for the airport as a whole. Under this approach the allocation of costs between aeronautical and non-aeronautical services is less significant, given that the allowable revenue figure is based on *total* costs. The single till approach has been used in the U.K. regulatory regime - total costs are projected over a five-year regulatory period along with non-aeronautical revenues.

SACL’s draft pricing proposal was predicated on the need to recover aeronautical costs by raising a required amount of aeronautical revenue. This implies the adoption of a dual till approach to revenue determination. Although SACL has not taken non-aeronautical revenues into consideration, it has taken some of the costs associated with the supply of non-aeronautical services into consideration by allocating joint and common costs between aeronautical and non-aeronautical services<sup>57</sup>. The cost allocation methodology used by SACL is discussed in detail in chapters 8 and 9.

In proposing a dual till approach to pricing SACL points to the consistency of the dual till approach with government policy as reflected in the pricing policy paper<sup>58</sup> and supporting legislative framework; to economic arguments based on the promotion of economic efficiency; and to precedents in other regulated industries. This chapter reviews the dual till

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<sup>57</sup> Common costs may be thought of as “costs of shared inputs used in the production of several outputs where the input proportions can be varied at the discretion of the enterprise, so that it is possible, in principle, to trace them to individual services”. Joint costs may be thought of as “costs in a multi-product enterprise not attributable to individual outputs or services” in fixed proportions. An example of a common cost in an airport context is passenger terminal corridors servicing retail and other non-aeronautical areas as well as passenger lounges and other aeronautical areas. An example of a joint cost is landside roads servicing car parking and car rental facilities as well as providing access to passenger terminals.

<sup>58</sup> Department of Transport and Regional Development, op. cit..



and single till approaches to pricing, firstly in terms of the applicable legislative framework, then in terms of economic arguments. Section 4.4 outlines the Commission's proposed approach to the dual till pricing issue and in section 4.5, issues relating to the application of this approach are discussed.

## 4.2 Legislative Framework

### 4.2.1. The Dual Till Approach to Pricing and the Regulatory Framework

SACL's draft proposal argues for a dual till approach to pricing, suggesting that:

In common with the Phase 1 and Phase 2 airports, in adopting these definitions of "aeronautical services" and "aeronautical related services" the Treasurer has given effect to the policy decisions of the Government as reflected in the Department of Transport and Regional Development November 1996 Pricing Policy Paper. Those decisions include the Government's intention not to mandate the use of a "single till" approach to airport pricing, and not to subject the entirety of an airport's operations to control or monitoring.<sup>59</sup>

The draft proposal further states that:

...the pricing structure and levels set out in this notification are:

consistent with the considerations to which the Commission must pay particular regard under section 17 of the PSA;

consistent with the special considerations set out in the Treasurer's Direction 16 made under section 20 of the PSA;

consistent with and supported by the policy position of the Government in relation to pricing at major Australian airports and, in particular, at Sydney Airport; and

equal to those required to be sought by the directors of Sydney Airports Corporation Limited in accordance with their duties under the *Corporation Law* and the *Governance Arrangements for Commonwealth Government Business Enterprises*.<sup>60</sup>

For the following reasons the Commission considers that it is not constrained, as a matter of law, to adopt a dual till approach to determining prices for aeronautical services at Sydney Airport.

In the Commission's view the pricing policy paper does not appear on its face to constrain the Commission in its choice of an appropriate pricing methodology. The statement that the government does not mandate single till does not appear either to prescribe the use of a dual till methodology or prevent the Commission from applying a single till methodology where appropriate.

The provisions of the PS Act, in particular those set out in section 17(3) and the Unit Cost Direction do not require the adoption of a dual till methodology. The pricing policy paper cannot be relied upon to introduce a limitation on the scope of the Commission's discretion that does not otherwise arise from the legislative instruments. As a result, the Commission considers that the pricing policy paper does not absolve it from its task of determining the

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<sup>59</sup> Sydney Airports Corporation Ltd, (1) op. cit., p.3-1. Note that Direction No. 18 has subsequently replaced Direction No. 15, and that Direction No. 16 was replaced by Direction No. 19, which has been further replaced by Direction No. 21.

<sup>60</sup> Sydney Airports Corporation Ltd, (1), op. cit., p. 3-3. See above footnote regarding Direction No. 16.

most appropriate methodology for Sydney Airport in the light of the criteria set out in section 17(3) of the PS Act and the Directions, and its objectives as expressed in section 2.2 above.

The consequence of Declaration 89 is that only aeronautical services can be the subject of SACL's proposals, and thus the Commission's decision. The Commission cannot, for example, purport to set or object to the prices charged by SACL for non-aeronautical services. Nevertheless, in the Commission's view this does not prevent it from taking into account, where relevant, the interrelationships and/or interdependencies between the prices and costs structures of aeronautical services and those of other services provided at the airport for the purposes of setting the rate of return for aeronautical services. Indeed, to the extent to which they are relevant those matters must be taken into account. The Commission considers that to do so does not involve an attempt to regulate non-aeronautical services, nor is it inconsistent with the legislative framework.

In the Commission's view there is nothing in Direction No. 18 that indicates an intention that the Commission is required to adopt a dual till approach to setting the rate of return for the price increases for aeronautical services resulting from necessary new investment.

The Commission considers that it is not constrained by the fact that SACL has adopted a particular pricing approach in its pricing proposal. The Commission's task is to determine what is the most appropriate methodology to apply, having regard to the statutory criteria and the objectives of the Commission's powers. The Commission is not prevented from applying a methodology that differs from the dual till methodology as it has been applied by SACL in its proposal.

#### **4.2.2 Single Till and the Regulatory Framework**

BARA disputes SACL's interpretation of Government policy and the degree of discretion that the Commission has in the approach that it must use to evaluate SACL's pricing approach.

BARA argues that:

Interrelationships and interdependencies between aeronautical and non-aeronautical investment and revenues must be recognised in the assessment of returns required for both necessary new investment and pre-existing investments.<sup>61</sup>

According to BARA s17(3) and Direction No. 18 require that approach.

In support of its contention, BARA argues that the Commission is required to take these matters into account to the extent to which they are demonstrated to be relevant to:

- the overall rate of return earned by SACL from its investment in Sydney Airport;
- the profitability of SACL and the influence of that profitability on SACL's investment decision; and
- the overall efficiency of the Sydney Airport operations.<sup>62</sup>

In chapter 10 of its submission BARA seeks to demonstrate that the interdependencies and interrelationships are in fact relevant to those issues.

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<sup>61</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 56.

<sup>62</sup> See Board of Airline Representatives of Australia, (1) op. cit., pp. 53-55 and p. 86.

The Commission is of the view that it should take into account interdependencies or interrelationships between the costs and revenues of aeronautical services and those of non-aeronautical services at the airport, to the extent to which they are factually relevant and conceptually compelling. Whether they are relevant and compelling depends on an analysis of all matters that are relevant to the issues set out in section 17(3), the Unit Cost Direction and (with respect to the new investment component of the price increases) Direction No. 18. The extent to which the Commission should have regard to the “overall rate of return earned by SACL from its investment at Sydney Airport” and the “profitability of SACL and the influence of that profitability on SACL’s investment decisions” (as advocated by BARA) thus depend on the extent to which they are relevant to an assessment of these statutory criteria. These issues are discussed below in the context of the Commission’s economic analysis of the dual and single till approaches.

However in the Commission’s view even if it can be demonstrated that these matters are relevant to an assessment of these criteria, they do not necessarily require the Commission as a matter of law to have regard to the interdependencies and interrelationships between *all* aeronautical and non-aeronautical services. Further, even if they did, it would not necessarily require the Commission as a matter of law to adopt a single till approach. The appropriate methodology must be determined in the light of all of the relevant criteria. In particular, the Commission is concerned to apply a methodology that as far as possible reflects the objectives outlined in section 2.2.

#### **4.2.3 Conclusions**

The Commission concludes that it is not required, as a matter of law, to adopt either a dual till methodology (as advocated by SACL) or a single till methodology (as advocated by BARA and others). It accepts that interdependencies between aeronautical and non-aeronautical services at Sydney Airport are likely to be relevant matters to take into account. Which non-aeronautical services should be taken into account and the way in which they should be taken into account depends on a detailed consideration of the statutory criteria. Accordingly, the methodology that is appropriate, and the way in which that methodology should be applied, depend on an assessment of which methodology most adequately furthers the objectives expressed in relevant statutory criteria.

### **4.3 Economic Analysis: Dual Till v Single Till**

Chapter 2 outlined the regulatory framework as it applies to SACL. In that discussion it was noted that the instruments currently in place do not provide the Commission with any specific directions with regard to the general approach to pricing aeronautical services. Accordingly, the alternatives were assessed in light of the criteria set out in section 17(3), the Unit Cost Direction and (with respect to new investment) Direction No. 18, having regard to the objectives spelt out in section 2.2. A particular consideration is the dynamic incentives the chosen approach will provide to SACL. SACL should face appropriate signals for efficient new investment decisions as far as possible. Additionally, airport users should receive appropriate signals for the efficient use of the airport. A third objective in consideration of a suitable approach to aeronautical pricing is ensuring that SACL earns a reasonable rate of return on assets but does not generate monopoly rents. The Commission

considers that the objective detailed in section 2.2 relating to the efficiency of the cost base is not specifically relevant to the consideration of this question.

The Commission engaged consultants, the Network Economic Consulting Group (NECG), to provide advice to the Commission on SACL's adoption of a dual-till approach to pricing. A report was made publicly available in May 2000.<sup>63</sup> This paper assessed the likely implications of both single till and dual till with regard to three general types of economic efficiency – allocative, productive and dynamic. The Commission has taken NECG's report, and subsequent advice provided by NECG, into account in addressing this issue.

Section 4.3 presents SACL's arguments in support of the dual till approach to pricing, then the views expressed by interested parties in their submissions to the Commission. The dual till and single till approaches are then assessed against the Commission's objectives, as outlined in section 2.2.

#### **4.3.1 SACL's Arguments in Favour of the Dual Till Approach**

SACL's draft proposal supports a dual till approach to determine prices primarily on the basis of the need to provide pricing signals which would promote efficient use of existing airport capacity and signals for investment in additional capacity. The existence of excess demand (congestion) at Sydney Airport with the consequent need for appropriately timed investment is argued to increase the importance of efficient pricing of aeronautical services.<sup>64</sup>

SACL's revised draft proposal expands on the application of the dual till and advances the case for this approach. SACL argues (quoting Kahn) that in adopting a dual till, it has:

.....applied principles directed at achieving economic efficiency, ie:

The most fundamental corollary of the principles of efficient pricing is that to the extent goods or services have separate or separable costs, they must to the greatest extent feasible have correspondingly separate prices based on these costs.<sup>65</sup>

SACL argues that the single till is inefficient in that prices for aeronautical and non-aeronautical services do not reflect costs, and that it therefore gives rise to a cross-subsidy from non-aeronautical to aeronautical services. SACL suggests that the dual till overcomes this inefficiency.

Establishing prices in accordance with this economic principle ensures that the most fundamental role of prices will be achieved; that is, prices will:

- provide signals for investment in new/expanded capacity; and
- ensure that capacity is allocated to those who value it most.<sup>66</sup>

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<sup>63</sup> Network Economics Consulting Group, (1) 'Dual Till' at Sydney Airport, May 2000. The report is available on the Commission's website at <<http://www.accc.gov.au>>.

<sup>64</sup> See Sydney Airports Corporation Ltd (1), op. cit., p. 2-2 and pp. 3-4 to 3-5.

<sup>65</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.58. The quote is from Kahn, A.E., *Evidence on Behalf of the Government of the United Kingdom of Great Britain and Northern Ireland*, US/UK Arbitration Concerning Heathrow User Charges, May 1991, p. 3.

<sup>66</sup> Sydney Airports Corporation Ltd (2), op. cit., p. 59.

### 4.3.2 Submissions from Interested Parties

Submissions to the Commission from operators of the privatised airports were supportive of SACL's adoption of the dual till approach to pricing aeronautical services. Brisbane Airport agrees with SACL that a single till approach should not be utilised. Likewise, Perth Airport supports SACL's arguments against a single till. Melbourne Airport supports SACL's use of the dual till approach, arguing that it leads to more efficient outcomes overall than the single till.

Impulse Airlines also supports SACL's proposal.

Airport users, in general, strongly oppose SACL's application of the dual till approach. BARA is particularly concerned with the fact that dual till does not take into account the interdependency between aeronautical and non-aeronautical services. The BARA submission outlines the following arguments against SACL's proposal.<sup>67</sup> The existence of markets for non-aeronautical services at Sydney Airport is dependent upon the provision of aeronautical services. In providing these non-aeronautical services, airports are able to earn 'excess profits'. Accordingly, BARA argues that interdependencies must be explicitly recognised and incorporated when assessing aeronautical charges in order to avoid a transfer from airline travellers to the airport. Accordingly, single till is put forward by BARA as a common sense approach to pricing aeronautical services in the presence of interdependencies.

IATA fully endorses the views of BARA, also expressing the view that a dual till approach would lead to "windfall" gains for Sydney Airport.

If the "dual-till" were to be considered for Sydney, the Commission would have to consider the large impact on profits that would be made by SACL as non-aeronautical profit would not be constrained by the regulatory regime placed on aeronautical profit. The Commission will need to be mindful that high or excessive economic profit generated by SACL under a "dual-till" system may force it to intervene.<sup>68</sup>

BA advocates the continued use of the single till approach to aeronautical pricing, arguing that it provides airport operators with suitable incentives to develop commercial activities. BA also suggests that airlines should benefit from retail activities at airports as they bring passengers to the airport. In light of this argument, BA states it will consider 'reviewing alternative structures which would ensure that airlines benefit from wider revenue opportunities'.<sup>69</sup>

OAOA and the RAAA also endorse the arguments of BARA.

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<sup>67</sup> The BARA proposal was explicitly endorsed by IATA, BA and OAOA in their submissions to the Commission. To avoid duplication, each of these parties referred to the BARA submission for a substantive critique of SACL's proposal.

<sup>68</sup> International Air Transport Association, (2) op. cit., p. 3.

<sup>69</sup> British Airways, *Aeronautical Pricing Proposal by Sydney Airports Corporation Ltd: Submission to the ACCC*, November 2000.

### 4.3.3 Interdependencies

BARA argues that interdependencies between aeronautical and non-aeronautical investments and revenues need to be recognised and taken into account in the pricing of aeronautical services. BARA argues:

All economic activities undertaken in and around Sydney Airport depend upon the presence of the runway, the terminal, the airlines and the passengers. Without the airlines and more specifically airline passengers and freight, there would be no market for non-aeronautical services such as retail concessions and car parking.

A significant part of the returns to SACL in providing aeronautical services at Sydney Airport are excess profits from non-aeronautical services. Take airline passengers away and these excess profits do not exist. In this way, the demand for non-aeronautical services (and hence the profit from those services) is driven by the provision of aeronautical services to the airline and airline passengers.

BARA submits that in setting aeronautical charges these interdependencies must be explicitly recognised and incorporated.<sup>70</sup>

SACL acknowledges that interdependencies exist in the provision of aeronautical and non-aeronautical services, as they do for many other multi-product businesses. However they argue that the fact that they exist does not undermine basic economic principles, ie:

- that separable investment decisions must be taken with regard to their separable opportunity costs; and
- that prices are important for solving the allocation problem, and particularly important where a monopoly facility is nearing full capacity.<sup>71</sup>

SACL points to examples of regulated companies that face interdependencies in the provision and pricing of regulated and non-regulated services, such as electricity distribution businesses.

In none of these circumstances do regulators suggest that revenues or returns from one business should be used to subsidise the price of another. Rather, regulators generally focus on ensuring that adequate ‘ring-fencing’ arrangements between the regulated and non-regulated businesses prevail, often involving guidelines on appropriate cost allocation between them. In some cases the regulated business has been separated from the non-regulated business, and there is no opportunity for revenue from one activity being used to lower the prices of another. For example, electricity distribution businesses have been separated from the retail businesses in New Zealand and in South Australia, whilst gas network businesses operating a ‘covered’ pipeline in Australia are required to be separate legal entities and are not allowed to undertake related business activities.<sup>72</sup>

The existence of interdependencies raises a number of issues in relation to economic efficiency and market power. These are addressed in the discussion below.

### 4.3.4 Signals for Efficient New Investment Decisions

A significant concern arising from the application of the single till is its effect on the investment incentives of the airport operator. In the United Kingdom, for example, users of

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<sup>70</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 85.

<sup>71</sup> Sydney Airports Corporation Ltd, (2), op. cit., p. 67.

<sup>72</sup> Sydney Airports Corporation Ltd, (2), op. cit., p. 68.

the airport's aeronautical facilities bear the risk associated with non-aeronautical activities, as lower than expected revenues from these services results in higher aeronautical charges and vice versa. This separation of decision-making and risk-bearing is clearly an unsatisfactory outcome. Airport operators do not receive appropriate signals on which to base their investment decisions, and the risk is shifted to aeronautical users, who are potentially less informed than the airport operator and who do not make the investment decision.

If all profits from non-aeronautical services are translated into lower aeronautical charges, the airport operator has no particular incentives to invest in these non-aeronautical services. The single till can therefore amount to the imposition of a 100% tax on a relatively competitive activity to fund a non-competitive service (aeronautical services). One way of overcoming this regulatory problem is to require certain amounts of investment on the part of the airport operator. However, this gives rise to a substantial information asymmetry between the airport operator and the regulator, leading to a high risk of regulatory failure. Furthermore, in the case of SACL, the regulatory framework does not provide a mechanism for the Commission to enforce such an approach. Thus there is the potential under a single till for the incentives for efficient investment in non-aeronautical services to be blunted.

BARA recognises this difficulty in its submission to the Commission, and therefore suggests some refinement of the approach is required. It suggests that the Commission should be able to strike an appropriate balance between the interests of both SACL and airline travellers.

IATA cites BARA as suggesting that profits from aeronautical services should be allocated between user airlines (75 per cent) and the airport operator (25 per cent).<sup>73</sup>

A further problem with investment incentives under the single till approach is the extent of the Averch-Johnson effect or incentive to over-invest in capital equipment. On the basis that aeronautical services are more capital-intensive than non-aeronautical services, in some circumstances airports will want to expand the former relative to the latter.<sup>74</sup>

In general, removing certain services from the till – ie, adopting a dual till approach - reduces the asset base which is taken into account in determining regulated prices. It follows that the problems of ensuring efficient investment in non-aeronautical services will be a greater concern when a single till, rather than dual till, approach to regulatory pricing is employed.

In support of its application of a dual till approach to pricing, SACL highlights these problems regarding investment incentives under the single till approach. In particular, SACL suggests that the provision of non-aeronautical services is fundamentally a separate, optional investment decision. Instead of providing these services itself, it could choose to contract out its activities or capitalise its revenues by divesting all its non-aeronautical assets. SACL maintains that prices for a service should reflect total costs, including, critically, the value of land and cost of capital.

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<sup>73</sup> International Air Transport Association, (1) *op. cit.*, p. 4.

<sup>74</sup> This point is discussed in Network Economics Consulting Group, (1) *op. cit.*, pp. 5-6.

The Commission is of the view that these are legitimate concerns, and that the single till approach may not provide suitable investment incentives with respect to contestable non-aeronautical services.

This view is supported by NECG, which argues that the dual till approach does not require the regulator to assess the optimal level of investment in relatively competitive non-aeronautical services, as would be the case under single till. This represents a substantial lessening of regulatory risk, and therefore is likely to result in a greater level of dynamic efficiency in the provision of these services compared to the single till approach.

On the other hand, BARA argues that adopting a dual till approach to pricing ignores the substantial interdependencies between aeronautical and non-aeronautical activities at an airport.

BARA therefore disputes SACL's claim that its pricing proposal will result in efficient investment in additional capacity in the Sydney Basin. BARA considers that decisions concerning the "location, capacity and timing of a second major airport in the Sydney basin" are the outcome of political considerations in which aeronautical pricing is unlikely to play "any significant part". BARA also argues:

to the extent aeronautical charges will have any effect on this decision, in order to encourage efficient decisions, the charges must encourage efficient utilisation of the current airport site. As noted above the structure of prices proposed by SACL does little to encourage the efficient use of the airport.<sup>75</sup>

The Commission agrees with BARA's comments regarding the existence of interdependencies at Sydney Airport. In the Commission's view, however, the provisions of Direction No. 18, relating to necessary new investment, provide appropriate incentives for SACL to undertake efficient investment in aeronautical services.

In summary, the Commission considers that the dual till approach to pricing generally provides the airport operator with more appropriate incentives for new investment in non-aeronautical assets.

#### **4.3.5 Signals for Efficient Use of Airport Services**

SACL's proposal and the submissions received by the Commission raise two particular issues with respect to the price signals sent to airport users. The first is which approach maximises allocative efficiency. The second is the impact of each approach on congestion at Sydney Airport.

##### *Allocative Efficiency*

Under dual till, prices for aeronautical and non-aeronautical services are likely to be higher than the single till. One reason for this is that there is an incentive for the airport operator to shift common costs to the regulated (aeronautical) services, thereby increasing the regulated revenue requirement. Secondly, the airport operator may still charge the profit-maximising prices for the non-regulated (non-aeronautical) services, many of which generate relatively

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<sup>75</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 118.



high returns.<sup>76</sup> Therefore, across all airport services, the dual till is likely to result in revenues in excess of the total cost of providing all aeronautical and non-aeronautical services.

These high prices for aeronautical services cause a net welfare loss to society as consumers' valuations of aeronautical services are not reflected in the level of charges. This is referred to as allocative inefficiency.

NECG argues:

The size of the allocative efficiency losses associated with the dual till outcome will be determined to a large extent by a consumer's elasticity of demand for airport services. Specifically:

- The size of the efficiency losses associated with high aeronautical prices will be larger the higher the airport consumers' elasticity of demand for aeronautical services. That is, the consumption distortion (and efficiency loss) associated with higher aeronautical charges will be greater the more sensitive consumers are to airline prices; while
- The efficiency loss associated with higher non-aeronautical charges is less of a problem as consumers that are price sensitive have the opportunity to substitute these services for those obtained outside the airport. Therefore, the greater the ability of airport consumers to substitute non-aeronautical services for services outside the airport, the lower the efficiency losses associated with higher non-aeronautical charges.<sup>77</sup>

In general, the Commission accepts the view that the dual till gives rise to potential allocative inefficiency, given the issues that arise in relation to the allocation of joint and common costs across services either side of the till boundary. The size of this loss depends upon consumers' elasticity of demand for airport services, in particular aeronautical services. That is, the more elastic their demand, the greater will be the extent of the allocative efficiency losses. In the case of aeronautical services at Sydney Airport, neither SACL nor other interested parties have suggested that there will be any effect on end-user demand as a result of the proposed price changes. As a working assumption, therefore, it can be considered that demand is relatively price inelastic; ie consumers are relatively unlikely to change their consumption decisions in response to changes in aeronautical prices. It follows that allocative efficiency losses arising as a consequence of the single till are likely to be minimal, although the problem remains a concern nonetheless.

Moreover, any welfare losses associated with above-cost pricing of existing services needs to be weighed against the welfare gains to consumers and society generally from the provision of a greater range of non-aeronautical services than would be likely under a single till approach.

The move to dual till also results in a transfer of income and welfare from airport users to SACL. The Civil Aviation Authority (CAA) in the United Kingdom drew attention to this issue:

The effect however is different at capacity constrained airports. If prices are below their market clearing level they do not act as the primary mechanism by which capacity is allocated. Price

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<sup>76</sup> Information on the returns from non-aeronautical services is available in Australian Competition and Consumer Commission, *Regulatory Report – Sydney Airport*. This is available on the Commission's website at <<http://www.accc.gov.au>>.

<sup>77</sup> Network Economics Consulting Group, (1) *op. cit.*, p. 3.

changes away from the 'single till' would therefore primarily result in rent re-distribution. It may have a secondary impact if some users are currently operating at marginal profitability (because they are unable to appropriate the full scarcity value of access, but are unable to sell their rights of access to those who could make better use of it).<sup>78</sup>

### *Congestion*

Sydney Airport faces little room for expansion on its current site, which makes it prone to congestion. SACL argues that a fundamental criticism of the proposition that returns from non-aeronautical services should be used to fund aeronautical services (as implied by a single till approach) is that it:

...ignores the role of price as a mechanism for allocating capacity amongst users and uses [...] To the extent that aeronautical prices are constrained to below the opportunity cost of providing aeronautical services, due to the inclusion of returns from non-aeronautical prices, this encourages artificially high demand for aeronautical services.<sup>79</sup>

SACL cites the UK experience with single till, where it has been criticised on the basis that it has contributed to congestion problems at London and Heathrow airports. This stems from the fact that aeronautical charges do not necessarily reflect the costs of providing the services. If total airport allowable returns are based on average costs, then as the CAA notes:

The result at congested airports is that the landing charges do not reflect their true value to users and thus compromise best use of capacity (especially where a cross subsidy between commercial revenues and airport charges is observed).<sup>80</sup>

By contrast, BARA argues that the high prices that result from SACL's approach to pricing will not promote the efficient use of scarce capacity at Sydney Airport. BARA argues that airport customers have little capacity to respond to pricing signals through the range of options suggested by SACL, including scheduling larger aircraft and changing the time of flights.

[T]o the extent its pricing approach will have any effect on the decisions made by domestic and international airlines as suggested by SACL, SACL's pricing approach will likely result in the less efficient use of capacity at Sydney Airport.<sup>81</sup>

BARA suggests, like the CAA, that efficient price rationing of scarce capacity requires prices to be set on consumer valuations which are not the same as production costs when a facility is congested. Congestion pricing principles imply that scarce capacity is allocated through prices which take into account consumer valuation of services. BARA argues that, by contrast, SACL's pricing approach is essentially an average cost methodology which gives insufficient attention to the structure of prices most appropriate for allocating the use of congested facilities.<sup>82</sup>

In its advice to the Commission, NECG suggests that SACL's argument is not compelling, as congestion is not fundamentally related to the adoption of single till. A congested airport

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<sup>78</sup> Civil Aviation Authority, (1) *Issues for the Airport Reviews – Consultation Paper*, July 2000, p. 11.

<sup>79</sup> Sydney Airports Corporation Ltd, (2), op. cit., p. 62.

<sup>80</sup> Civil Aviation Authority, (2) *The CAA Approach to Economics Regulation and Work Programme for the Airport Reviews – Position Paper*, October 2000, p. 32.

<sup>81</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 114.

<sup>82</sup> *Ibid.*, pp. 114-118.

may be in a position to ration demand through price, thereby capturing congestion rents. This gives rise to regulatory problems common to either single or dual till, namely:

- Is it possible to design a congestion pricing approach that rations demand, but which maintains regulated revenue at the appropriate level — can the regulator hold revenue below the revenue cap;
- If not, is it possible to design an alternate and efficient non-price rationing approach which does this; and
- If not, who should get the congestion rent from the market clearing approach, and what mechanism should be used to make the necessary transfers.<sup>83</sup>

Single till should therefore not be rejected on the basis that it adds to congestion.

The existence of interdependencies is also a consideration in assessing the efficiency of the price signals sent to airport users. While the prices for aeronautical services are an important component of the signals airport users receive, they are not the only component. To the extent that other services are necessary in order to use the airport (ie, to the extent they are non-discretionary), then the decision to use the airport will take all these prices into account. For example, airlines will take into account refuelling charges, and passengers the cost of access to the airport. It follows that prices which send *efficient* signals to airport users will take account of these interdependencies.

The Commission is not persuaded that adopting a dual till is necessary or desirable for alleviating congestion at Sydney Airport. An essentially arbitrary increase in the allowed revenue requirement may indeed suppress some demand; however, there is no reason to believe that it will suppress demand in a way that leads to increased community welfare. It is only appropriate congestion charges that can have this effect; these, as NECG points out, can be adopted at any level of the revenue requirement consistent with the continued coverage of the variable costs of operating the airport. The Commission's views on the relationship between aeronautical charges and congestion is discussed in more detail in section 7.5.

#### **4.3.6 Market Power**

The debate between the various parties on the choice of till has focused on the extremes of dual till and single till. BARA observes that in competitive markets, interdependencies between goods and services are factored into the pricing of firms. BARA argues that SACL's dual till approach does not do this, instead pricing aeronautical services for full cost recovery, whilst allowing SACL to enjoy 'excess profits' on the provision of non-aeronautical services. This results in total airport revenues in excess of total costs (including the cost of capital). According to BARA, in SACL's proposal:

...no recognition or adjustment is made for the large excess returns associated with non-aeronautical activities or the contribution made by aeronautical services in achieving these abnormal returns.<sup>84</sup>

Furthermore, BARA argues that SACL's proposal 'would not be sustainable without the exploitation of market power'.<sup>85</sup> BARA argues that SACL's approach to pricing ignores the

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<sup>83</sup> Network Economics Consulting Group (1), op. cit., p. 8.

<sup>84</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 106.

<sup>85</sup> Ibid., p. 107.

reality of competitive markets, in that firms typically take these interdependencies into account when pricing, rather than treating each activity as an independent business. BARA cites various examples of how interdependent goods and services are priced in competitive markets, such as the pricing of car-parks below cost in order to stimulate patronage of shopping centres.<sup>86</sup> BARA's advocacy of single till is founded upon the argument that interdependencies extend across the whole of the airport business.

Similarly, NECG argues that a dual till approach may lead to an over-recovery of revenues by SACL.

To the extent that unregulated non-aeronautical services are not effectively disciplined by competition, prices for these services will be set above cost.... Therefore, over all airport services, the dual till is likely to result in revenues in excess of the total cost of providing all aeronautical and non-aeronautical services.<sup>87</sup>

A critical aspect to NECG's argument is the possibility that some non-aeronautical services are not subject to competitive constraints. That is, SACL may hold market power in the provision of such services.

SACL argues that NECG provides no evidence to support its assumption that any non-aeronautical services at Sydney Airport are not subject to competitive pressures. An issue for the Commission to address, therefore, is the extent to which non-aeronautical services are, or are not, effectively disciplined by competition.

The Commission accepts the view that the existence of interdependencies may result in SACL having market power with respect to some non-aeronautical services. In this context, the adoption of SACL's dual till approach may allow SACL to recover fully the costs of aeronautical services, while generating 'above-normal' profits on some other services. Information provided to the Commission for regulatory reporting purposes and analysis conducted by the Commission, both previously and as part of its assessment of SACL's current proposal, tends to support this view.<sup>88</sup>

## **4.4 Commission Assessment**

### **4.4.1 Introduction**

The Commission considers that the dual till approach to pricing aeronautical services provides certain advantages over the single till approach traditionally applied by regulators. In particular, SACL would face significantly more efficient investment signals with regard to contestable non-aeronautical services. On the other hand, the Commission remains concerned that the extent of the dual till proposed by SACL does not adequately address the efficiency or market power consequences of dual till as discussed in section 4.3 above.

The single till approach to pricing aeronautical services does have certain characteristic features that account for its popularity in the regulation of airports around the world. In

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<sup>86</sup> Ibid., p. 86.

<sup>87</sup> Network Economics Consulting Group (1), op. cit., p. 2.

<sup>88</sup> See Australian Competition and Consumer Commission, *Regulatory Report – Sydney Airport 1998-99*, December 1999 and Australian Competition and Consumer Commission, *Fuel Throughput Levies*, December 1998.

calculating allowable revenues on the basis of total airport costs (including capital costs), it ensures that airport operators earn a reasonable return on total assets, while preventing them from exploiting their market power. Furthermore, it is practical to apply, as airport operators are free to recover costs through any charging structure they deem suitable. Cost and revenue allocation issues therefore do not arise in the context of aeronautical pricing. The Commission does have concerns, however, regarding the price signals faced by airport users and in particular, the investment incentives faced by SACL, under the single till approach.

In light of the foregoing discussion, the Commission's view is that neither the single till nor the dual till approach are conclusively superior in terms of economic efficiency impacts. The Commission does, however, have sympathy with the view put by SACL that a dual till approach is effectively adopted in most other regulated industries and no compelling reasons have been provided for deviating from this practice in relation to airports. There are, however, important practical issues associated with the implementation of the dual till that must be addressed. Specifically, these issues are the boundaries of the till and the scope for contributions from non-aeronautical to aeronautical services. These are addressed in the following discussion, which concludes with a discussion of the approach the Commission has adopted.

#### **4.4.2 Delineation of the Boundary Between the Two Tills**

In arguing for a dual till approach to pricing of aeronautical charges SACL refers to precedent in other regulated industries, noting that regulators commonly distinguish between contestable and non-contestable services supplied by the same company and only regulate the latter.

However, unlike other industries, such as gas, the regulation of airport services has not been founded upon a systematic analysis of the extent of market failure. Instead, the aeronautical/non-aeronautical distinction is an historical legacy, described by the PSA as an essentially 'arbitrary boundary'.<sup>89</sup> To some extent, more rigorous assessment has been undertaken - the distinction between 'aeronautical-related' services (the set of non-aeronautical services to be price monitored) and other non-aeronautical services was determined by the Minister on the basis of an analysis, undertaken by the Commission, of the extent to which these services were subject to competitive constraint.

The Commission agrees with NECG that a preferable means of determining the aeronautical/non-aeronautical distinction would involve a detailed whole of business analysis. This would involve an examination of each functionally distinct service supplied by the airport to assess the extent to which demand and supply side substitution is feasible. Demand side substitution relates to the ability of consumers to substitute services acquired from the airport with those provided by other parties. Supply side substitution relates to the barriers to entry faced by firms which could potentially compete with the airport in the supply of certain services.

An analysis of the aeronautical/non-aeronautical distinction would also need to consider the extent to which demand for non-aeronautical services is interdependent with aeronautical

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<sup>89</sup> Prices Surveillance Authority, *Inquiry into the Aeronautical and Non-Aeronautical Charges of the Federal Airports Corporation*, August 1993, p. xxii.

services. The issue here is the extent to which non-aeronautical services are discretionary from the perspective of airport users. Again, the preferable approach to determining the extent of interdependencies entails a detailed market analysis.

A full analysis of these issues is beyond the scope of this decision and is more properly a matter for the review of the regulatory framework for airports, including Sydney Airport, currently being carried out by the Productivity Commission.<sup>90</sup> Recommendations on the scope of regulation at Sydney Airport, and other airports, are expected to be made to the Government around December 2001. Nevertheless the efficiency and market power issues are relevant to the Commission's considerations of SACL's proposal.

#### **4.4.3 Contributions from Non-Aeronautical Services**

In evaluating the dual till the Commission has considered to what extent, if at all, returns from the provision of non-aeronautical services should be factored in to the calculation of allowed returns from aeronautical services. It may be desirable for the returns derived from non-aeronautical activities to make an explicit contribution to the allowable revenue applicable to aeronautical services.

##### *IATA's Proposal*

IATA advocates a contribution of 75 per cent of non-aeronautical profits to the aeronautical revenue requirement.<sup>91</sup> IATA argues for this contribution as an approach to take into account the interdependencies between aeronautical and non-aeronautical services while avoiding some of the downside of the single till approach. This is consistent with the arguments of BARA.

But there are some downsides with using a single till approach. One particular downside which SACL pointed to was the fact it reduces incentives of the airport operator to invest in non-aeronautical facilities, because under a single till pricing regime if it does something innovative on that side of its business all it does is reduce aeronautical charges on a dollar by dollar basis. That reduces the incentives for efficient investment in non-aeronautical activities.<sup>92</sup>

IATA's argument for a 75 per cent contribution appears to rest primarily on its judgment about equity in the distribution of profits.

##### *NECG Option*

An alternative option for determining a contribution to aeronautical charges, if it is considered appropriate to do this, has been put forward by NECG on the basis that an airport can secure a revenue stream from unregulated activities merely as a result of the flow of passengers through the facility. Taxing that revenue stream to cover some part of the costs of the facility, including those costs that are caused by air movements, does no more than recognise the fact that the passenger flow is secured jointly by the airport and by the airlines. The revenue stream to the airport from an additional air movement therefore

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<sup>90</sup> Productivity Commission, *Price Regulation of Airport Services - Issues Paper*, January 2001.

<sup>91</sup> International Air Transport Association, (1) op. cit., p. 4.

<sup>92</sup> G Woodbridge, Frontier Economics, Transcript of Proceedings: Australian Competition and Consumer Commission, *Sydney Airport Public Discussion Forum*, 13 December 2000, p. 88.

comprises both the payments made by the airline for airport services and some element of passenger expenditure on services that are not directly regulated. If that element is excluded from the allowable revenue, the airlines could be providing the airport with an element of monopoly profit.

As a means of determining the contribution to the allowable revenue made by non-aeronautical services, NECG proposes an incentive based model whereby discretionary services are imputed by way of benchmarks. The airport is able to retain any revenues above the imputed value, ensuring it retains the incentives to efficiently develop discretionary services.

Specifically, NECG would recommend that the Commission consider the following approach:

- First, cost-based regulation is limited to the set of services that are considered to be non-contestable;
- Second, an average revenue figure is imputed to the full set of contestable services supplied by SACL on the basis of national and international benchmarks;
- Third, the Commission attributes a proportion of this revenue to the revenue cap, allowing SACL to recover the remainder of the revenue allowed under the cap from non-contestable services; and
- Finally, any revenues that SACL is able to generate above the benchmark amount are irrelevant for regulatory purposes.<sup>93</sup>

NECG considers this approach provides the airport with good incentive properties with respect to non-contestable services and provides airport customers with prices for non-contestable services that more closely approximate the net cost of those services.

#### **4.4.4 The Commission's Approach**

The prices oversight arrangements applicable to SACL are essentially intended to promote efficient use of infrastructure and to prevent operators from abusing the market power which they possess by virtue of their ownership of facilities with natural monopoly characteristics. As noted in the *Pricing Policy Paper*:

Pricing oversight arrangements are intended to promote operation of the airports in as an efficient and commercial a manner as possible. Pricing is fundamental to the efficient use of airport infrastructure. [...] The arrangements should also aim to protect airport users from any potential abuse of market power by operators. Market power stems from the fact that airports have natural monopoly characteristics.<sup>94</sup>

Accordingly, the Commission considers that when considering the appropriate rate of return for aeronautical services (as defined by Declaration No. 89), it is relevant to take into account costs and revenues associated with any services in relation to which Sydney Airport has market power by virtue of its ownership of facilities having monopoly characteristics.

BARA argues that because of the existence of interdependencies across most of SACL's activities, all revenues associated with the operation of the airport must be accounted for when setting aeronautical charges. In the Commission's view, however, there are other

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<sup>93</sup> Network Economics Consulting Group, (2) *Sydney Airport Revised Draft Aeronautical Pricing Proposal – Final Report*, December 2000, pp. 19-20.

<sup>94</sup> Department of Transport and Regional Development, op. cit., p. 1.

alternatives. While the Commission agrees that there is complementarity between aeronautical and most non-aeronautical services<sup>95</sup>, this does not necessarily imply interdependency. That is, certain non-aeronautical services are not integral to the provision of aeronautical services, and therefore would generally not be subject to regulation. These commercial activities are those that would generally be characterised as contestable. While the fact that SACL is the monopoly provider of aeronautical services provides a competitive advantage in these complementary markets, evidence is not available to suggest that the services provided in these markets are not contestable. In general terms, the Commission presumes that competitive market outcomes should prevail wherever possible and that regulation should only occur where market failure is apparent. Incorporating all airport services, including those that are contestable, via a single till approach to pricing is therefore considered inappropriate.

The Commission considers that a full investigation of the extent of SACL's market power, or the extent to which aeronautical and non-aeronautical services are interdependent, necessitates a detailed market study. It is the view of the Commission that such an evaluation is more appropriately conducted as part of a review of the regulatory environment rather than in its application. Accordingly, rather than undertaking a detailed analysis of the full range of services provided at Sydney Airport, the Commission has adopted the distinctions set out by the regulatory instruments for the purpose of assessing SACL's proposal. Specifically, the Commission considers that a contribution from the services defined as 'aeronautical-related' under Direction No. 21 should be incorporated into the calculation of allowable revenues from aeronautical charges.<sup>96</sup> These services are:

- aircraft refuelling;
- aircraft maintenance sites and buildings;
- freight equipment storage sites;
- freight facility sites and buildings;
- ground support equipment sites;
- check-in counters and related facilities;
- car parks (including public and staff parking but not valet parking).

To the extent that profits from aeronautical-related services appear to be 'above normal', a contribution will be subtracted from the total revenue allowable from aeronautical charges.<sup>97</sup> It is the Commission's view that this approach best meets its various objectives. Unlike the single till, the exclusion of contestable services from the Commission's considerations provides incentives to SACL for efficient investment in these areas. The contribution from aeronautical-related services also addresses some of the limitations of SACL's approach in relation to efficiency and market power. Under the Commission's approach, SACL can

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<sup>95</sup> Certain services might be excluded from this characterisation; for example, the services provided at some significant distance from the aeronautical facilities. Complementarity occurs when increased passenger throughput gives rise to increased revenues to other businesses at the airport.

<sup>96</sup> This is consistent with the arguments of NECG.

<sup>97</sup> Further details regarding the calculation of this contribution are provided in chapter 11 on Financial Modelling.



continue to charge profit-maximising prices for aeronautical-related services. The effect of the contribution, however, is to give an outcome that better approximates a competitive market when compared to SACL's proposal.

In calculating allowable aeronautical revenues on this modified basis, significant complementarities still exist between the set of (aeronautical and aeronautical-related) services taken into account and other contestable services. The Commission's view is that the premium attaching to the charges for most contestable services at an airport is driven by the advantages of the location, which in itself is not sufficient justification for an explicit contribution.

By way of contrast, NECG suggests that in recognition of the fact that complementarities extend beyond the adopted definitions of aeronautical services, some contribution to aeronautical charges could be made from contestable services.

The revenue stream to the airport from an additional air movement therefore comprises both the payments made by the airline for airport services and some element of passenger expenditure on services that are not directly regulated. If that element is excluded from the revenue cap, the airlines could be providing the airport with an element of monopoly profit.<sup>98</sup>

The contribution, it is noted, must be set at less than the 100 per cent level implicit in the single till, in order to provide suitable investment incentives to SACL. NECG suggests the use of an imputed revenue contribution based on national and international benchmarks.

The Commission is not persuaded that there are further efficiency gains to be achieved from implementing a contribution as proposed by NECG. Such an exercise would give rise to subjective judgments on the part of the Commission, increasing the risk of regulatory failure and involving potentially substantial practical difficulties. In light of these considerations, the Commission will not attempt to allocate a contribution from contestable services in its assessment of SACL aeronautical charges. The Commission considers that transfers should only be accepted where they can be shown to deliver clear efficiency gains.<sup>99</sup>

The Commission's approach is consistent with the remarks of the CAA on the rent redistribution arising from any move away from single till at congested airports. In light of this possibility, the CAA has articulated its specific objective in choosing an approach: 'the CAA will adopt a regulatory approach which is most likely to maximise the total economic surplus generated, irrespective of which parties enjoy that surplus'.<sup>100</sup> It is the Commission's view that the proposed approach in the case of Sydney Airport is more efficient than either the single till or SACL's dual till approach.

#### **4.5 Application of the Commission's Approach**

Adopting a dual till approach and taking SACL's performance in the provision of aeronautical-related services into account raises two implementation issues. The first relates to the allocation of costs between aeronautical and non-aeronautical services. This arises

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<sup>98</sup> Network Economics Consulting Group, (2) op. cit., p. 19.

<sup>99</sup> See Network Economics Consulting Group, (3) *Land Valuation at Sydney Airport*, May 2000, p. 6. NECG also cited the British Monopolies and Mergers Commission (now the Competition Commission) on this issue.

<sup>100</sup> Civil Aviation Authority, (2), op. cit., p. 6.

with any application of a dual till approach. The second issue, specific to the approach adopted in assessing SACL's proposal, is determining the contribution from aeronautical-related services.

#### **4.5.1 Cost Allocation**

As noted in section 4.3.5, cost allocation is a significant issue in assessing a suitable approach to aeronautical pricing. Irrespective of whether the cost allocation incentive results in allocative inefficiency or a welfare transfer, the application of the Commission's approach gives rise to stringent accounting separation requirements in order to address the problem.

IATA emphasises this point:

In the "dual till" pricing system proposed by SACL there will need to be detailed and robust oversight by the Commission to ensure that aeronautical and non-aeronautical activities do not overlap.<sup>101</sup>

SACL also recognises the issue. It notes that the incentive to shift common or joint costs to regulated parts of a business from unregulated parts is similar to other industries, such as electricity and telecommunications.<sup>102</sup>

Various cost allocation approaches can be adopted; however each of the available options has shortcomings. The Ramsey-Boiteux method, which allocates common costs in inverse proportion to demand elasticity, has a well-known information burden. The Commission's telecommunications principles discussed an approach involving an 'equi-proportionate mark-up over directly attributable costs', which, whilst it has some analytical merit, does not necessarily lead to an efficient outcome.

Sydney Airport is required to keep separate accounts for aeronautical and non-aeronautical services under the *Airports Act 1996*. These are reviewed by the Commission on an annual basis. SACL employs an Activity Based Costing model (ABC) to allocate costs between aeronautical and non-aeronautical activities. This model has been used since 1993 as a basis for consultation with the aviation industry, and later to inform the Commission about cost disaggregation.

The use of an activity based costing model to allocate common costs between contestable and non-contestable activities may be a reasonable practical approach, particularly if subjective judgements about the most appropriate drivers can be avoided. SACL's approach to cost allocation is discussed in more detail in chapters 8 and 9.

#### **4.5.2 Estimating an Aeronautical-Related Contribution**

In estimating a contribution from aeronautical-related services, the Commission was mindful of the need for SACL to generate an economic return from the provision of these services. Accordingly, the size of the contribution reflects the extent to which revenues appear to be 'above normal'. That is, the contribution estimates the extent to which aeronautical-related revenues exceed costs (including cost of capital).

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<sup>101</sup> International Air Transport Association, (2) op. cit., p. 3.

<sup>102</sup> Sydney Airports Corporation Ltd, (2), op. cit., p. 65.

A more detailed explanation of the Commission's method of estimating the contribution from aeronautical-related services, including the estimated costs, revenues and asset values, is contained in chapter 11. The Commission's analysis tends to support the view that these returns appear high.

## **4.6 Commission draft decision**

In the past airport prices were set by the FAC on a single till basis. The FAC adopted a rate of return target for the airport as a whole, and set aeronautical charges at the level required to meet the rate of return target. Since profitability on non-aeronautical services was high, and typically well above the target rate of return for the airport as a whole, this meant that returns on the aeronautical side of the business were low, often negative.

SACL has departed from this approach by separately identifying the costs associated with providing aeronautical services. SACL conceptually separates aeronautical services from other services, and sets prices based on the cost of providing the aeronautical services (including a rate of return on assets). This is described as a 'dual till' approach to pricing. SACL argues that this approach follows the policy intent – only aeronautical services are declared, not the airport as a whole. SACL also argues that the dual till approach sends better signals for investment.

BARA argues that the existence of strong interdependencies between aeronautical and non-aeronautical services lends support to a single till approach. In other words the high profitability on car parking, duty free and other non-aeronautical services is only possible because of the aeronautical activities of the airport.

The draft decision considers the arguments presented by the parties and assesses SACL's proposal against the objectives set out above. The draft decision's main conclusions are as follows:

- The dual till approach is likely to provide better signals for efficient investment in non-aeronautical services. If profitability on those investments flows into aeronautical pricing outcomes then the operator will have limited incentives to develop non-aeronautical services.
- The use of a single till approach has superior properties in relation to allocative efficiency. In competitive markets companies typically take the profits from interdependent services into account in setting prices. 'Free' mobile phones are a possible example. As such, and as pointed out by BARA, the single till is more representative of the outcomes that would occur in a competitive environment than the dual till.
- In relation to efficient use of airport services the Commission is not persuaded that prices based on the dual till approach would provide better signals than the 'single till' approach.
- SACL's application of the dual till does not adequately address the scope of the airport operator to take advantage of market power.

The discussion suggests that the dual till approach proposed by SACL has disadvantages both in relation to economic efficiency and in relation to the regulatory framework covering

Sydney Airport. Similarly the single till approach has limitations, again in relation to economic efficiency, but also in relation to the Government's policy intent.

The draft decision proposes an alternative application of the dual till which takes into account the airport operator's financial performance in the provision of certain non-aeronautical services.

The Commission considers that the approach adopted will yield better economic efficiency outcomes than SACL's proposals and is consistent with the regulatory framework. The approach provides the same incentives for investment into non-aeronautical services as SACL's proposal, but goes some way to addressing the proposal's limitations in relation to allocative efficiency and market power.

In principle the non-aeronautical services taken into account in the Commission's alternative application of the 'dual till' should be limited to those services where the airport operator has a significant degree of market power. However, a full assessment of the coverage of the regulatory framework is considered beyond the scope of this decision and more properly a matter for the Productivity Commission in its review of the airports regulatory framework.

Nevertheless the existing framework already provides regulatory scrutiny over some non-aeronautical services. Direction No. 21 requires the Commission to monitor the prices, cost and profits of specified aeronautical-related services. These include car parking and refuelling charges. As stated in the Government's pricing policy paper the monitoring program recognises that airport operators may have market power in the provision of these services.

The draft decision takes the airport's performance in providing the monitored 'aeronautical-related' services into account in determining allowable revenue and prices. It does this as follows:

- first 'above normal' profits made by SACL in the provision of these services are estimated for 2000/01.
- these above normal profits are then subtracted from the estimated "allowable revenues" for aeronautical services.

The Commission's draft decision is to object to the dual till methodology as applied by SACL. The Commission's preferred model is to take into account a contribution from certain non-aeronautical services in pricing aeronautical services. Specifically, the contribution takes into account the costs and revenues associated with services defined as 'aeronautical-related' in the Minister's Direction No. 21.

The model is applied as follows. Services defined as 'aeronautical' under Declaration 89 are incorporated into the cost base from which a 'dual till' estimate of aeronautical revenues is determined. The contribution from aeronautical-related services is then subtracted from this figure to generate the total allowable revenue from aeronautical services.

## ■ Chapter 5: Asset base – assets other than land

### 5.1 Introduction

Under the building block approach proposed by SACL, the value of the non-land assets is important to the determination of allowable revenue in two respects. First, it is the basis for determining a return of capital, or depreciation, charge. Secondly, SACL's cost of capital will be applied to the depreciated asset value to determine an amount of revenue that SACL requires in order to compensate it for the opportunity cost of funding those assets.

The Commission's 1998 decision regarding aeronautical charges at Sydney Airport noted that the process of determining the extent to which increases in charges proposed by the FAC could be justified would be assisted by a review of depreciation, of asset values and of the rate of return on assets.<sup>103</sup>

This section discusses the valuation and depreciation of the assets owned by SACL. The designation of those assets as either aeronautical or non-aeronautical is discussed in chapter 8.

### 5.2 SACL Proposal

The basis upon which assets other than land have been valued by SACL is Optimised Depreciated Replacement Cost (ODRC or DORC). In this respect SACL has sought consistency with the Commission's DRP.

An assessment of the ODRC of all non-contestable buildings and civil works was undertaken for SACL by consulting engineers Maunsell McIntyre Pty Ltd (Maunsell McIntyre) in association with Rawlinson Australia Pty Limited, Cost Consultants and Quantity Surveyors.

SACL's draft pricing proposal comprised a valuation of existing assets as at 1 July 1998. These asset values were then adjusted for depreciation, indexation, disposals and new capital expenditure. Significant capital expenditure took place at the airport between 1 July 1998 and 1 July 2000, the actual value of which was estimated by SACL in order to prepare its draft pricing proposal in early 1999. The ODRC value of aeronautical assets as at 1 July 2000 included in the draft pricing proposal was approximately \$1,082m. This comprised \$561m for assets existing at 1 July 1998 and \$521m for assets added between 1 July 1998 and 1 July 2000.

SACL's revised draft pricing proposal was also based on the 1 July 1998 valuation rolled forward to 1 July 2000. It was however adjusted for actual costs of the capital expenditure over the 1998-2000 period and "minor changes...made in relation to allocations made between aeronautical and non-aeronautical services".<sup>104</sup> Among the more significant items to change from the draft pricing proposal to the revised draft pricing proposal were:

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<sup>103</sup> Australian Competition and Consumer Commission, (2) op. cit..

<sup>104</sup> Sydney Airports Corporation Ltd, (2) op. cit, p.70.

- treatment of land-fill. This transferred \$188.8m from land to other fixed assets; and
- the exclusion of \$48.4m related to “ground access facilitation”.

This resulted in a valuation of total aeronautical assets (excluding land but including land-fill) of approximately \$1,167m. The value of these assets prior to being allocated between aeronautical and non-aeronautical services was \$1,630m.

In early November 2000 SACL supplied the Commission with the ODRC valuation as at 30 June 2000 carried out by Maunsell McIntyre. Total assets (pre-allocation, excluding land and movable plant) were measured at approximately \$1,608m. SACL advised BARA that “The magnitude and nature of the changes in value are not so material that they would require SACL to make any changes to the revised proposal given that target revenue of \$205m is currently around \$38m below allowable revenue of \$243m.”<sup>105</sup>

In January 2001 SACL provided the Commission with another financial model that contained an ODRC value for aeronautical assets (excluding land) of \$1,129m. This value incorporates the ODRC valuation supplied to the Commission in November 2000.

### 5.3 Views of interested parties

Reflecting the structure of SACL’s draft pricing proposal, BARA carried out its analysis by classifying the SACL assets in two groups: those existing on 1 July 1998 and those added between 1 July 1998 and 1 July 2000.

In its submission, BARA puts the view that the aeronautical charges that the FAC had in place in 1998 form an efficient starting point:

BARA submits that the Commission should not re-open existing prices and should not adopt SACL's approach of revaluing assets and its move away from the single-till approach. This conclusion is based on BARA's view that the current prices at Sydney Airport provide more than a reasonable return to SACL. Support for this conclusion is set out in chapters 4 and 7 (of the BARA submission) which detail the history of the current SACL charges. This chapter (Chapter 8) sets out further evidence for the conclusion that SACL's existing returns are adequate and that there is no justification for increases in charges in relation to pre-existing investment.<sup>106</sup>

BARA’s view is that, from this efficient starting point, subsequent capital expenditure should be assessed in the context of the *necessary new investment* provisions set out in Direction No. 18. The reasoning behind this view is provided in Chapter 7 of the BARA submission. BARA criticises SACL’s draft proposal and the revised proposal for not addressing the criteria provided by Direction No. 18. It concludes that:

SACL's failure to identify and separate new investment from pre-existing investment in its revised proposal does not remove the requirement for the Commission to assess SACL's proposal in accordance with Direction No. 18. The requirements of Direction No. 18 are clear. It requires the Commission to apply specific criteria when assessing proposals to increase prices *as a result of* necessary new investment. In other words, if the proposed price increase results from or is causally connected with new investment, the Commission must apply the criteria. Furthermore, Direction No. 18 expressly states that the Commission *must* take the criteria into account. To the extent that the revised proposal does not enable the Commission to undertake

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<sup>105</sup> SACL email to BARA, 16 November 2000. Any correspondence cited in this draft decision is not of a confidential nature and the Commission will make it available on request.

<sup>106</sup> Board of Airline Representatives of Australia, (1) op. cit, p.59.

this task, the proposal should be rejected by the Commission in its current form and SACL should be requested to represent the proposal in accordance with the requirements of the regulatory framework.<sup>107</sup>

Notwithstanding BARA's disagreement with deriving an ODRC valuation for assets existing at 1 July 1998, BARA Commissioned consultants to assess the value of a sample of assets from the asset register compiled by SACL's consultants, Maunsell McIntyre. BARA's consultants' report, made available to the Commission and its consultants, concluded that "...the ORC values included in SACL's asset valuation represent a less than satisfactory replacement values (*sic*)".<sup>108</sup>

Regarding additions to the asset base between 1 July 1998 and 1 July 2000, BARA attempted to conduct an assessment of these assets in the context of its view of the regulatory regime applying to SACL and, in particular, the Direction No. 18 criteria. BARA's findings, presented in Chapter 9 of its submission, were that the \$521m value SACL had included for the asset additions should be reduced by \$140m for a combination of the following reasons:

- the assets did not fall within the definition of aeronautical services provided by Declaration 89;
- SACL provided insufficient information to assess the allocation of the asset between aeronautical and non-aeronautical activities;
- non-aeronautical assets were incorrectly allocated to aeronautical by SACL;
- some assets could not be regarded as 'new investment' according to the Commission's definition.<sup>109</sup>

BARA also claims that a paucity of information prevented it from quantifying further reductions resulting from:

- Expenditure on the assets that occurred prior to SACL acquiring the lease to Sydney Airport on 1 July 1998;
- The new investment being assessed against the criteria in paragraph 2 of Direction No. 18.

BARA questioned the consistency of SACL's valuation of 1 July 1998 with that dated 1 July 2000 – the results of which were not made available to BARA until mid-November 2000. The BARA submission argued that:

... the draft proposal was based on pre-existing assets and new projects, whilst the revised proposal is based on individual assessments of all assets. BARA understands from SACL that adjustments have been made to remove certain new projects not undertaken, and to update the costs of remaining projects to reflect actual costs incurred. However, no information supporting this assertion is provided to allow the airlines to compare the actual costs included in SACL's

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<sup>107</sup> Ibid, pp.45-46.

<sup>108</sup> Ibid, Appendix 11, p.4.

<sup>109</sup> The Commission's definition of "necessary new investment" as it relates to the prices oversight arrangements at Australian airports is contained in the Commission's new investment position paper. New investment is defined as "...a change in fixed durable inputs that does not simply seek to replace natural degradation of capital".

revised proposal with the estimated costs presented in the draft proposal for each project. Further, the information presented in the revised proposal includes actual asset values from SACL's ABC model. Different cost allocation methodologies were used in the draft proposal. A major concern with this information is that there is no link to individual projects presented in the draft proposal and therefore BARA is unable to assess these assets against the relevant criteria.<sup>110</sup>

The view of Melbourne Airport was typical of a number of the submissions made by other Australian airports: “whilst we have not closely scrutinised the value of non-land assets, the values that have been arrived at are within the range of what could be expected”.<sup>111</sup>

In their submissions, the operators of Brisbane, Canberra, and Perth airports expressed disappointment that in its revised proposal SACL had excluded a provision for ongoing capital expenditure. In its draft proposal SACL had included an allowance of \$30m per annum for an “ongoing minor capital works program (intended) to avoid the need for repetitive future price notifications in respect of comparatively minor items”.<sup>112</sup> The following statement by Brisbane Airport Corporation reflects the sentiment of these operators:

Brisbane Airport strongly support the concept of establishing a pool of funds (with the total amount being relatively immaterial in comparison to major projects) that could be expended on minor projects that meet the Commission Necessary New Investment guidelines, and are agreed upon by the local Airport Operating Committee...Therefore, Brisbane Airport considers the retraction of this approach by SACL in the (revised draft proposal) as disappointing.<sup>113</sup>

## 5.4 Consultants' views

The Commission reviewed the valuation as at 1 July 2000 carried out for SACL by Maunsell McIntyre and Rawlinson Australia Pty Limited, Cost Consultants and Quantity Surveyors. This valuation was made available to the Commission in November 2000. The Commission employed Opus International Consultants Limited (Opus) to conduct the review. The report prepared by Opus is available from the Commission's website at <<http://www.accc.gov.au>>.

In conducting its review and preparing the report Opus “considered the appropriateness of the methods used, the suitability of assumptions made, and the accuracy of the valuation”. Opus concluded that “the work underpinning (the Maunsell McIntyre) valuation was found to be both thorough and professionally competent”.<sup>114</sup>

Opus' review noted a number of limitations in determining an ODRC value of SACL assets which related to the quality of the information available. Opus concludes however that it has “taken these limitations into account and has found through extensive cross checking of information sources, that the inventory overall provides a realistic basis for the valuation”.<sup>115</sup>

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<sup>110</sup> Board of Airline Representatives of Australia, (1) op. cit., p.35.

<sup>111</sup> Australia Pacific Airports Corporation, *ACCC Consideration of Draft Pricing Proposal for Sydney Airports Corporation Limited – Response to Issues Paper*, November 2000.

<sup>112</sup> Sydney Airports Corporation Ltd, (1) op. cit., p.5-16.

<sup>113</sup> Brisbane Airport Corporation, op. cit.

<sup>114</sup> Opus International Consultants Ltd, *Sydney Airport Valuation 2000 Review*, 2000, p.69.

<sup>115</sup> Ibid.



## 5.5 Discussion

SACL's draft pricing proposal and revised proposal were predicated on the recovery of aeronautical costs by raising a required amount of aeronautical revenue, which implies the adoption of a distinct aeronautical "till". This is a point of view with which BARA fundamentally disagrees, as discussed in the section on dual till in this paper.

Additionally, SACL's asset valuation methodology is based on the ODRC approach described in the Commission's DRP. BARA disputes the appropriateness of applying the ODRC to SACL assets when a dual till approach to pricing is adopted.

In its DRP the Commission considered the merits of two approaches to asset valuation, the ODRC and historic cost approaches. The Commission decided to adopt the ODRC valuation methodology as a cap on the valuation of the asset base.

The DRP outlines the advantages of the ODRC approach from the viewpoint of economic efficiency:

First, while the outcomes of competitive or contestable markets do not provide all of the answers, regulators often look to competitive or contestable markets for guidance on efficient decision rules for regulating natural monopoly markets. Such comparisons can provide useful guiding principles for certain regulatory problems. In addition, the establishment of broadly symmetrical pricing and incentive structures across regulated and unregulated markets has attractions on general resource allocation grounds. It is noted in this regard that one of the objectives is to replicate the desirable outcomes of a competitive market.

Second, the maintenance of revenue streams over time a level consistent with a DORC asset valuation will minimise the likelihood of significant shocks to tariffs as the replacement of assets becomes necessary. As the existing assets will dominate the capital base and therefore tariffs for a number of years, this objective of minimising shocks to tariffs will be most easily achieved if the existing assets are valued at or close to DORC.

Thirdly, as noted above, any value that is in excess of DORC is likely to imply pricing of services that will expose the service provider to being by-passed. While the significant entry and exit costs that characterise electricity transmission make large-scale duplication of the existing system unlikely, by-pass may be feasible at the edges of the network. In such circumstances some of the cost that gave rise to by-pass will inevitably be absorbed by the remaining customers who do not have by-pass options.

Finally, another justification for DORC setting the upper limit to valuations comes from what a DORC valuation actually is attempting to measure. This is the maximum price that a firm would be prepared to pay for 'second hand' assets with their remaining service potential, higher operating costs, and (old) technology – given the alternative of installing new assets which will have a greater remaining service potential. Therefore, if prices reflect a value that is in excess of DORC, then users would be better off if the existing system were scrapped and replaced by new assets. Similarly, if assets are sold for prices above the DORC valuation then this implies that scarce investment funds are being inefficiently applied: in this case, it would have been a more efficient use of investment funds for the existing assets to be scrapped and a duplicate system installed.<sup>116</sup>

The DRP also comments on the use of valuations based on historical cost for regulatory purposes:

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<sup>116</sup> Australian Competition and Consumer Commission, (2) op. cit., p. 40.

While historic cost, if available, offers (or appears to offer) a firmer base than DORC, there are many aspects which make it unsuitable as a method of establishing a cost base consistent between different network owners. Some issues are the following:

- inconsistent past accounting practices with respect to how much of an asset was capitalised eg. in the past network assets had a high day labour content which was not treated in a common way between transmission network service providers.
- the industry has been subjected to structural change which has often been done without sufficient attention to asset valuation;
- very similar assets in different networks can have different historic values due to different purchasing practices; and
- attempts to inflate historic costs to current costs are fraught with problems and will frequently result in a much higher value than a depreciated current replacement cost based on modern equipment of equivalent capacity. Because of technological improvements and economies of scale the cost in real terms of most electricity assets has fallen consistently over time.

Therefore, the Commission will not consider historic cost as an asset valuation methodology.<sup>117</sup>

SACL's proposals for asset valuation are consistent with the DRP in that they are based on the ODRC methodology. This draft decision does not revisit SACL's use of the ODRC methodology. Instead it focuses on SACL's *application* of the ODRC methodology. Nevertheless the Commission invites comments on the appropriateness of using ODRC based valuations for purposes of setting aeronautical charges at Sydney Airport.

### 5.5.1 Information Issues

SACL has argued that airlines have been provided with information sufficient to value SACL's aeronautical assets on an ODRC basis.

BARA disagrees with SACL and has set out its concerns in section 6.3 of its submission. The submission claims that SACL has refused to provide essential information. Of the information that has been provided, BARA argues that it is incomplete, of poor quality and was delayed. BARA also notes that asset valuation information is inconsistent between the draft proposal and the revised proposal.

Commenting on their review of the 1998 valuation carried out by Maunsell McIntyre, BARA's consultants noted:

The documentation that we were given were drawings, specifications, some reporting documentation on previous reports that had been done, and also some costing documentation. Unfortunately the scale of the drawings and the detail on a lot of the drawings was limited. The specifications were, we believe, not adequate enough to describe the assets, and because of that various assumptions had to be made, and it was difficult then to work out what assumptions the previous people had actually made... And the main thing that I think really made a big difference was the lack of supporting documentation behind the estimates. So in the end of that, we really said, from the sample that we looked at, that the replacement values that we saw were actually less than satisfactory.<sup>118</sup>

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<sup>117</sup> Ibid, pp. 41-42.

<sup>118</sup> Mr Mark Quinn, Rider Hunt Pty Ltd, Transcript of proceedings: Australian Competition and Consumer Commission *Sydney Airport Public Discussion Forum*, Melbourne 13 December 2000.

As discussed elsewhere in this draft decision, BARA's position is that a valuation of SACL's assets on an ODRC basis is not appropriate under the regulatory framework that applies to SACL. Notwithstanding this, BARA argues that "...even if the regulatory framework were altered to allow the Commission to adopt its building block methodology, the information supplied by SACL in connection with its proposal is grossly inadequate to implement that approach".<sup>119</sup>

Opus also identified issues regarding the quality of the information that SACL used in its valuation:

Reliability of the valuation directly reflects the accuracy of information that was available. Some assets are well documented and have detailed inventories. There are also some assets for which very little relevant information is available... The information sources researched as part of this review were sometimes disparate and difficult to locate.<sup>120</sup>

The Commission acknowledges the difficulties faced by BARA in assessing the latest SACL valuation. SACL provided BARA the results of the valuation in November 2000 but did not invite BARA to review that valuation. The Commission, through the work of Opus, has been able to obtain some confidence in SACL's later valuation. However, the Commission would generally prefer that greater rather than less transparency be present in a process where the users of a facility are best-placed to provide commentary on the appropriateness of a valuation.

The Commission's view is that sufficient information exists to form a view as to the likely range of an ODRC value for aeronautical assets at Sydney Airport. For the purposes of this draft decision, the Commission has made assumptions that allow it to calculate an indicative value for aeronautical assets in order to derive a maximum allowable revenue. However, the following discussion highlights a number of areas in which SACL should revise its valuation and respond to the Commission.

### **5.5.2 Assets that do not require replacement**

The DRP had the following to say about assets that do not require replacement:

A related issue concerns assets which do not require full replacement in order to regain full utility at the end of their technical life. These could be classified as refurbishment assets. The well known example of this is distribution gas pipelines originally based on cast-iron pipes laid underground. Full refurbishment of such assets typically involves relining the pipes with nylon inserts, a procedure which does not require expenditure in digging up the ground or involve extra expenditure to accommodate existing 'brown-fields' infrastructure.

The normal DORC procedure would involve valuing the assets as if the pipelines had to be re-laid from scratch as this identifies the potential costs for a competitor of duplicating the system (a property of the DORC approach). However, the DORC valuation of such refurbishment assets seriously overstates the long run capital costs associated with related service provision. This is seen as potentially leading to long run cost estimates which are overstated and may lead to inefficient pricing.

The solution to this dilemma is not to adjust the DORC valuations downwards but to recognise that, with such assets, the residual value of assets at the end of their technical life is not their scrap value, rather it is the savings that their availability represents over having to reconstruct the

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<sup>119</sup> Board of Airline Representatives of Australia, (1) op. cit., p.42.

<sup>120</sup> Opus International Consultants Ltd, op. cit., p. 2.

infrastructure from scratch. The natural conclusion then is that in determining the depreciation allowances contributing to price formation, the accumulated depreciation needs only account for the fall in asset value from its initial ORC value to the market value just prior to refurbishment. Such reduced depreciation allowances provide for pricing which better reflects true long run incremental costs. It is not inconceivable that similar ‘refurbishment’ opportunities exist for other infrastructure assets and the refurbishment approach should be applied.<sup>121</sup>

The SACL approach to asset valuation was to assume that with the exception of landfill all aeronautical assets on the airport would be replaced. SACL assumed that all residual (or “salvage”) values were zero.

BARA’s position is that “If a building blocks approach is to be adopted, BARA is of the strong view that such (sunk assets that never need to be replaced) should be valued for regulatory purposes at their scrap value”.<sup>122</sup>

The Commission’s position, consistent with the DRP, is that assets that do not need to be replaced should have depreciation allowances reduced to zero. Therefore such assets should be carried in the asset base at their optimised replacement cost.

### 5.5.3 Optimisation

In applying the valuation principles using ODRC, there are degrees of optimisation that may be presumed. At one extreme, the valuation may be on a green-fields basis which assumes that an optimal site location is selected and an optimally-configured facility is constructed on that site.

The SACL approach is to assume that the existing aeronautical facilities are replaced using modern equivalent technology, taking into account an optimised construction sequence and the complications of a brown-fields development. Such complications relate to the additional cost involved in undertaking construction works on a facility that is being used. Implicitly, the SACL approach does not reduce the value of assets to the extent that they are redundant, obsolete or over-designed. The approach also assumes that the existing location of the airport and the configuration of the facilities on that site are optimal.

BARA’s review of the Maunsell McIntyre valuation carried out in 1998 found that a number of redundant assets (estimated at \$1.6m in 1998) were included in the asset base. BARA further argued that it was aware of other assets in the 1998 asset list that would have become redundant with the completion of capital works over the 1998-2000 period. Section 16 and Appendix 11 of the BARA submission detail these concerns.

In its review of the SACL valuation, Opus sought to extend the level of optimisation such that obsolete or over-designed assets or assets with surplus capacity were not included in the valuation. In other respects the degree of optimisation was assumed consistent with the SACL approach – that is, airport re-configuration or relocation were not considered. Opus identified a number of assets which would not be replaced in their current form and thus would have had their value over-estimated using the SACL approach. For example, the design of the older runway (16R-34L) is now partially redundant as a result of works associated with the nearby sea port. The Opus report notes that if the runway were to be

<sup>121</sup> Australian Competition and Consumer Commission, (1) op. cit., p.45.

<sup>122</sup> Board of Airline Representatives of Australia, (1) op. cit., Appendix 11, p.10.

replaced there would be a reduction in the quantity of sea protection works and also the amount of airfield grass.

Other examples of sub-optimal assets identified by Opus included part of a services tunnel associated with the passenger terminal and an elevated water tank.

The Commission regards as appropriate a brown-fields rather than green-fields level of optimisation of assets at Sydney Airport. Considering first the issue of the airport's location, the Commission notes that the future regulatory framework for Sydney Airport is currently uncertain. To the extent that the regime governing other privatised Australian airports can be used as a guide, a regulatory review period of five years may apply. The Commission's view is the development of a second airport in the Sydney basin within a five-year period is unlikely. This is consistent with the recent statement by the Minister for Transport and Regional Services:

Sydney Airport is comfortably handling its growing level of air traffic and the Federal Government, after lengthy and careful consideration, has concluded that it would be premature to build a second major airport in the city...The Government is confident that the commercial decisions by the airlines and our policy measures will ensure that Sydney Airport will be able to cope with the increasing air traffic until the end of the decade.<sup>123</sup>

In the absence of an ability to develop a green-fields alternative in the time frame of the current regulatory period, the Commission's view is that a brown-fields valuation represents an efficient benchmark for the SACL assets. It is also consistent with the valuation of land in its current location (refer to chapter 7).

Given that site re-location does not appear practical, the question arises as to whether the configuration of the assets on the current site is optimal. SACL presents its view in the revised proposal, concluding that "...it is not clear that the existing airport layout is sub-optimal given the value of land in the Sydney Airport region and the unresolved issues related to separate international/domestic terminals".<sup>124</sup> Given the difficulties of identifying any alternative configuration of assets that could drive obvious efficiency gains, the Commission's view is that a valuation based on the existing configuration is reasonable.

The Commission's draft decision is that valuing SACL's assets on a brown-fields basis is reasonable. SACL should however make adjustments to its asset valuation to allow for the items that the Opus report identifies as sub-optimal.

#### **5.5.4 Depreciation**

In making its decision in relation to the FAC's 1997 proposal to increase aeronautical charges at Sydney Airport, the Commission noted the concerns of airport users regarding the rates of depreciation. In its statement for the public register the Commission put its view that:

...greater transparency in the FAC's costing of the components of large capital items and the depreciation rates to be applied to those components would serve to address the concerns of industry and subject the FAC's depreciation policies to a commercial focus. It is therefore

<sup>123</sup> The Hon John Anderson MP, Minister for Transport and Regional Services, "Sydney's Future Airport Needs", Media Release, 13 December 2000.

<sup>124</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.78.

recommended that for the larger capital items the FAC/SAC should provide a higher-level breakdown of depreciable components and their associated rates and that the Commission should consider this issue in the context of a future review of prices.<sup>125</sup>

At Appendix J of its draft proposal SACL provided a list of aeronautical assets (excluding movable plant) prepared by Maunsell McIntyre. This list set out for each asset, or component thereof, the age, the remaining life and the useful life. Depreciation was determined by applying a straight line charge to the Optimised Replacement Cost value of the asset over each asset's useful life. The later Maunsell McIntyre valuation, provided to the Commission and BARA in November 2000 also included depreciation details.

In general, BARA finds the useful lives of assets determined by SACL to be "reasonable". BARA does however express "...some concerns regarding the use of different asset lives for the same asset".<sup>126</sup>

Using the example of aerobridges, BARA argues that:

SACL has clearly failed to apply the replacement cost methodology consistently. It would be expected for example, that a modern aerobridge would have the same asset life (as an older aerobridge).

SACL has simply extended the useful lives of older assets. This practice should be vigilantly guarded against. Looking forward, SACL should not be encouraged to assume unrealistically short asset lives, and, when these asset lives are almost at an end, to extend the life and claim depreciation expenses as if the asset had always been depreciated over this longer period. Such an approach would guarantee the over-recovery of replacement costs.

Appropriate asset lives should be used. If the true economic life of an aerobridge, for example, is 40 years, then this should be used consistently for all assets in this class.<sup>127</sup>

The use of differing useful lives for similar assets appears to have arisen from the methodology SACL adopted to determine the useful life of each asset. SACL's approach was to determine the age of the asset and the remaining life of the asset. These two amounts were then summed to arrive at a useful life. Potentially, this can lead to the situation that BARA describes.

In its review of Maunsell McIntyre's work, Opus estimated the remaining life of an asset by subtracting the age from its useful life. Correct application of the replacement cost methodology requires that useful life is determined independently of the age of the assets.

The Commission notes that a number of the recommendations in this draft decision imply a lower depreciation charge for SACL's proposal. Examples include the lengthened lives of certain RTA assets and a lower square metre rate for airfield grass. The Commission has not attempted to re-calculate the depreciation charge in SACL's building block using the recommendations in this draft decision. For the purposes of calculating an indicative "maximum allowable revenue" figure in this draft decision however, the Commission has used an assumption that the total depreciation charge will be five per cent lower than that figure contained in the SACL financial model. That is, while the SACL financial model provided to the Commission in January 2001 incorporates a depreciation charge of \$40.1 million, the Commission has based its estimation of "maximum allowable revenue" on a

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<sup>125</sup> Australian Competition and Consumer Commission, (2) op. cit.

<sup>126</sup> Board of Airline Representatives of Australia, (1) op. cit., p.139.

<sup>127</sup> Ibid., p.140.

depreciation charge of \$38.1 million. In preparing its response to the Commission's draft decision, it is expected that SACL will make the appropriate changes to the relevant depreciation rates and derive a revised depreciation charge.

### 5.5.5 The Valuation of Particular Assets

In its review of the SACL asset register BARA identified a number of asset groups that, in its view, were potentially over-valued. The report prepared by BARA's consultants was provided to Opus during its review. This section highlights the more significant areas where there were differing views between SACL, BARA's consultants and Opus.

*Land-fill and Seawalls* – In SACL's asset base, land-fill relates to those areas of land that have been reclaimed from Botany Bay for use as runways and taxiways. SACL's revised proposal states that:

As part of the 1 July 1998 valuation, Maunsell McIntyre valued the replacement cost (ODRC) of the sea walls and land-fill around both runways that extend into Botany Bay. Given the relatively recent land reclamation undertaken as part of the construction of the third runway, these values are understood to be robust.

In the December 1999 Draft Proposal, SACL recognised that there is an overlap between the ODRC value of sea walls and land-fill and the replacement cost value of land. To ensure that no double counting occurred, SACL:

- included the value of sea walls in fixed assets and deducted the same amount from the value of land in the Draft Proposal; and
- excluded land fill completely from the fixed assets.

There is no clear reason why sea walls and land reclamation costs should be treated differently from a valuation perspective. Accordingly, the Revised Draft Proposal includes both sea walls and land-fill in fixed assets and deducts both values from the net land value.

The impact of the change is to:

- increase the value of fixed assets related to Runways, Taxiways and Aprons by \$188,820,450 as at 1 July 1998; and
- reduce land value by the same amount to a net \$427,579,550.

Land-fill has a zero depreciation rate, although its value is indexed at assumed CPI in line with the treatment of all other assets in the financial model.<sup>128</sup>

In its submission, BARA observes that:

As the same return to capital (WACC) is placed on land and non-land assets, this reallocation has no net affect on capital costs.

Where it does have an effect, however, is in relation to the value of land appreciation. By reducing the land valuation by \$321.6 million SACL has, through this reallocation, reduced the real value of land appreciation by about \$9.6 million (3% of \$321.6 million).

SACL's approach is flawed. In considering land appreciation, it is necessary to consider appreciation on the total value of land, not the value adjusted for seawalls and landfill. To the extent SACL's land valuation approach is at all appropriate, the correct question is what is the increase in the market value of the land, not the increase in the market value of the land less the cost of seawalls and landfill.

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<sup>128</sup> Sydney Airports Corporation Ltd, (1) op. cit., p.81.

For the purposes of determining economic income from land appreciation, land is land. SACL has failed to recognise this.<sup>129</sup>

Opus noted that “No detail was available as to what assumptions had been made in deriving the quantities of (land)fill used in the valuation. It has not been possible to review this item”.<sup>130</sup> The Opus report does however opine that certain layers of the rock walls that serve as sea protection do not require a depreciation allowance for physical deterioration. Both BARA and Opus identified difficulties with the information that would support Maunsell McIntyre’s valuation. Opus reported:

In the absence of quantity or cost information to support the basis for the current valuation, Opus has undertaken rough order costings of an optimised replacement. These calculations appear to indicate that the current cost rates significantly overstate replacement cost.<sup>131</sup>

The Commission is concerned that the absence of supporting information may have caused Maunsell McIntyre to over-estimate the Optimised Replacement Cost of the seawalls.

The Commission’s draft decision is that for the purposes of determining regulated aeronautical prices land-fill is indistinguishable from other land. It should therefore be excluded from the ODRC valuation of assets. The area represented by land-fill will be included in the valuation of land (see chapter 7).

Regarding seawalls, the Commission’s draft decision is that SACL review its valuation and depreciation allowance drawing on comments contained in the Opus report.

*Airfield Grass* – The total ODRC value of airfield grass in SACL’s proposal is \$23.5m, with the ORC estimated at \$45,207,981. The SACL proposal depreciates the grass over a period of 25 years, implying an annual depreciation charge of \$1.8m. BARA put the view that, if properly maintained, a regenerating asset such as grass may never need replacement. This means that there would be no need to depreciate the asset. SACL responded to BARA’s view claiming that extended periods of dry weather and flooding with salt water mean that the airfield grass is subject to a finite life. The Opus review concurred with the BARA view that a zero net annual depreciation was appropriate. In doing so it was assumed that areas of grass requiring replacement would be most appropriately funded as an operating expense.

The Commission agrees with the view of BARA and Opus that, given appropriate maintenance, the airfield grass is unlikely to require replacement. In effect, the ORC will continue to be equal to the market value of the asset. (It is noted that BARA disagrees, arguing that the grass should be assigned a zero value for regulatory purposes on the basis that is a sunk asset that does not require replacement.) Consistent with the Draft SRP there is no need for SACL to allow for depreciation of the airfield grass. This means that the asset should be included in the aeronautical asset base at its ORC.

The Commission also concurs with the view of BARA and Opus that the valuation for airfield grass should incorporate a unit cost that reflects seeding rather than turfing. Opus estimates that this could halve the square metre rate for airfield grass.

<sup>129</sup> Board of Airline Representatives of Australia, (1) op. cit., pp. 125-6.

<sup>130</sup> Opus International Consultants Ltd, op. cit., p.32.

<sup>131</sup> Ibid, p.30.



Opus further notes that the ORC valuation should reflect the optimised sizing of runway 16R-34L.

The Commission's draft decision is that no depreciation should be applied to airfield grass and the asset should be included in the aeronautical assets at its ORC. This ORC should reflect the field seeding, rather than turfing, method of construction and should allow for an optimised sizing of runway 16R-34L.

*Runways, Taxiways and Aprons* – For the purposes of its ODRC valuation, SACL has split its runways, taxiways and aprons (or “RTA’s”) into three distinct layers, with each layer considered to be a separate asset. The layers comprise a top layer, usually constructed of concrete or asphalt, a middle layer of compacted rock aggregates (known as the base course) and lower layer of foundation soils (known as the sub-grade). A summary of the various opinions of SACL, BARA and Opus on the lives of the RTA components is provided in the Opus report and is reproduced below as Table 5(a).

SACL has applied useful lives of between 58 and 100 years to the base course and sub-grade. BARA contends the base course for flexible pavements (those with an asphalt wearing course) and the sub-grade for both flexible and rigid pavements (those with a concrete wearing course), if appropriately maintained, have infinite lives and therefore do not require replacement.

In its analysis, Opus makes a distinction between RTA’s constructed since 1962 and those constructed earlier. For the former group, Opus shares BARA’s view that the base course and sub-grade is unlikely to physically deteriorate the base course. Opus does however recommend an annual depreciation charge of 1 per cent to cover the risk of technological obsolescence.

The Opus report contains the table on the following page that summarises the differing opinions of SACL, BARA and Opus regarding thickness, useful life and residual value of the RTA’s.<sup>132</sup>

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<sup>132</sup> Ibid, Table 4 : Pavement Parameter Comparisons, p.19.

**Table 5(a): Expert Views on RTA Valuation.**

Element	Thickness (mm)			Life (years)				Residual Value (%)			
	SA CL	BARA	Opus	SACL	BARA	Opus		SACL	BARA	Opus	
						Pre-1962	Post-1962			Pre 1962	Post 1962
<b>Runways – Asphalt Wearing Course</b>											
Asphalt	60-160	60	50	12-14	14	14	14	0	0	0	67%
B/C	450-650	600	600	60-70	∞	75	∞	0	100	0	100
S/G	NA	NA	NA	58-100	∞	75	∞	0	100	50	100
<b>Runways – Concrete Wearing Course</b>											
Concrete	400	450	400	50	50	50	50	0	0	0	0
B/C	150	200	200	50	50	50	50	0	0	0	25
S/G	NA	NA	NA	100	∞	50	∞	0	100	50	100
<b>Taxiways</b>											
Asphalt	50	50	50	12	10 -15	14	14	0	0	0	67%
B/C	(1) 300-650	500	300 – 600	60	∞	75	∞	0	100	0	100
S/G	NA	NA	NA	60	∞	75	∞	0	100	50	100
<b>Aprons</b>											
Concrete	300-450	450	300-400	32-50	50	50	50	0	0	0	0
B/C	200-300	200	200	32-50	50	50	50	0	0	0	25
S/G	NA	NA	NA	40-100	∞	50	∞	0	100	50	100

Source: Opus International Consultants Limited, "Sydney Airport 2000 Valuation Review", December 2000.

The Commission's draft decision is that SACL does not require a depreciation charge to allow for physical deterioration of the sub-grade component of its RTA's. Nor is a depreciation allowance required for physical deterioration of the base course of RTA's with an asphalt wearing course. However, the application of a minimum depreciation rate of one per cent per annum to allow for the possibility of technological obsolescence would appear reasonable.

*Runways, Taxiways and Aprons constructed prior to 1962* – In its ODRC valuation process SACL identified a number of areas of base course and sub-grade constructed prior to 1962 which were deteriorating and would require replacement. According to SACL, the reason for the deterioration was the use of materials which over time proved to be less suitable. Opus agreed that replacement of these assets may be necessary and ought to be allowed for in determining depreciation. In relation to the sub-grade however Opus' view was that there would remain significant salvage value in the materials at the end of their useful lives.

The Commission recognises that where a facility provider will unavoidably incur costs in the future in order to continue providing regulated services, there may be a case to allow the recovery of those costs through regulated charges. In the case of SACL's pre-1962 RTA assets, the revenues would need to be sufficient to allow SACL one more replacement event. Thereafter no depreciation of those assets would appear appropriate. This situation creates complications for the regulator under the existing regulatory environment in that, should a depreciation allowance for pre-1962 assets be allowed, there is currently no provision for the Commission to re-set the regulated prices to a lower level after the replacement of the pre-1962 assets has occurred.

The Commission's draft decision is that SACL should allow for depreciation of its pre-1962 RTA assets on the same basis as its post-1962 assets. The Commission regards the minimum depreciation allowed for technological obsolescence as sufficient provision for the replacement of those pre-1962 RTA assets that are deteriorating.

*Allowance for Management, Financial and Other Costs* – In estimating the costs of buildings, a percentage is usually added to the costs to represent professional fees and project management costs incurred by the owner of the building. SACL, BARA and Opus all differed to some degree in their views of appropriate percentages. These views were summarised by Opus in the following table:<sup>133</sup>

**Table 5(b): Expert Views on Management, Financial and Other Costs.**

Cost Component	SACL		BARA		Opus	
	Infrastr.	Build.	Infrastr.	Build.	Infrastr.	Build.
Preliminaries	5	10	3	10	3	10
Builders Margin			1.5	5		
Site Allowance				3		
Professional Fees	10	12	2.5	6	6 - 12	12
Management	2	2			2	2
Financial Charges	4	4			5*	5.5*
Total Allowance	21.9%	29.3%	7.2%	26.1%	15.6-22.5%	30.9%

SACL Total Allowance = (1 + prelim+ prof fees) x (1+mgmt+financial) -1

BARA Total Allowance = (1 + prelim) x (1+builders margin) x (1+ site allowance) x (1 + prof fees) -1

Opus Total Allowance = (1 + prelim) x (1 + prof fees +mgmt)+ financial -1

\* assumes a WACC of 8%

Source: *Opus International Consultants Limited*

The Opus report notes the significant effect on total value that assumptions regarding these costs imply.

Allowance for other costs such as professional fees and financial charges are included in the valuation as a percentage increase applied to the construction cost. The percentage used has a significant effect on the overall value, increasing \$20M for every 1% increase in the allowance.

<sup>133</sup> Ibid, Table 3 : Comparison of Cost Allowances, p.13.

The review has identified that the current allowance is potentially underestimated. Opus recommends that a detailed review be undertaken to confirm the value of this allowance. Potential changes could increase Optimised Replacement Cost (ORC) and Optimised Depreciated Replacement Cost (ODRC) by up to \$100M.<sup>134</sup>

The Opus report makes specific reference to SACL's assumptions regarding the timing of costs incurred for developing airport projects:

With respect to the second aspect (timing of costs), this is also a key issue. The current allowance provides a one-year period from the start of construction until the asset is available for use. This assumption is appropriate for incremental development or renewal work. It is however far too short for the initial greenfields stage of development where a two-year construction period would be more realistic. This would add another 5% to the costs (ie \$100M).<sup>135</sup>

In responding to Opus' comments during the peer review process, SACL's advisers, Maunsell McIntyre, noted that:

Management and financial fees have been added separately in the valuation spreadsheet as they are generally considered to be an actual cost to the Owner.<sup>136</sup>

The Commission notes that a range of opinions has been expressed by experts employed by BARA, SACL and the Commission on the issue of management, financial and other costs. Given that the estimate of SACL's advisers appears to fall within that range the Commission does not regard as unreasonable the rates SACL has used in compiling the ODRC asset valuation.

## 5.6 Commission assessment

The Commission's view is that efficient prices are likely to flow from a range of asset values. While the Commission recognises the degree of subjectivity inherent in an ODRC valuation process, this potential for inaccuracy is compensated for by the efficiency benchmarks that such a valuation represents.

In much of the above discussion the Commission has noted differences of professional opinion amongst Maunsell McIntyre (on behalf of SACL), Rider Hunt (BARA) and Opus (the Commission). In many cases the Commission is not in a position to choose one particular adviser's view in preference to others. The approach that the Commission has therefore taken is to recommend changes to SACL's proposal in those cases where Rider Hunt and Opus are in agreement. An example of this may be seen in the Commission's view regarding airfield grass. In cases where Opus and Maunsell McIntyre have similar views the Commission has not recommended changes to SACL's proposal. Finally, in those cases where the views of all three valuation specialists are somewhat diverse and the valuation included in SACL's proposal falls between that of Rider Hunt and Opus the Commission has decided not to object to the valuation provided by SACL. This was the case regarding the allowance for management, financial and other costs.

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<sup>134</sup> Ibid, p.70.

<sup>135</sup> Ibid, p.13.

<sup>136</sup> Ibid, p.14.

For the purposes of calculating an indicative “maximum allowable revenue” figure in this draft decision, the Commission has assumed the value of assets other than land excludes the ODRC valuation of land-fill. The number used has therefore been derived as:

**Table: 5(c): Commission ODRC figure**

ODRC from SACL January 2001 model	\$1,129m
<i>Less</i> ODRC of land-fill from SACL January 2001 model	\$198m
ODRC used in Commission modelling	\$931m

The Commission has not made any other adjustments to the asset base recognising that the ODRC will be affected by the revision of some depreciation rates and other relevant variables. In some cases, for instance where it is recommended that asset lives be extended, these adjustments will increase the ODRC of certain assets. In other cases, the ODRC will be reduced through optimisation, the application of lower unit rates or any shortening of asset lives. Given that some of these adjustments are likely to be complementary, the existing asset valuation serves as a useful guide to a revised valuation.

The Commission’s draft decision is that a more appropriate aeronautical asset base should be determined by SACL and submitted to the Commission. The effect of this revised valuation should be reflected in a revised depreciation charge.

## ■ Chapter 6: The Necessary New Investment Criteria Under Direction No. 18

### 6.1 Introduction

As discussed in Chapter 2 the Commission is required to take into consideration the criteria contained in Direction No. 18 concerning increases in charges resulting from necessary new investment (NNI). This point is expanded upon in the next section, which describes the legal framework.

SACL's position, expressed in the revised proposal, is that,

...the NNI criteria have only limited application to the Revised Draft Proposal. SACL seeks to establish a reasonable pricing base for Sydney Airport following a history of network based pricing and under-recovery of aeronautical investment, originally by the Commonwealth and, most recently, the FAC.

While the ACCC may consider certain elements of SACL's Proposal in terms of the NNI criteria, there is no legal or policy impediment to the ACCC also considering existing assets and new assets that may or may not meet the NNI criteria using the building blocks approach to revenue determination. Indeed, SACL believes that the broader public (as opposed to narrow sectional) interest requires that the ACCC should adopt this approach.

SACL prepared the December 1999 Draft Proposal, and the Revised Draft Proposal, using the building blocks approach to revenue determination consistent with the ACCC's approach to price regulation in the electricity and gas industries. The building blocks provide a comprehensive (as opposed to incremental) approach to determining appropriate revenues, consistent with principles observed in competitive markets.

...(The NNI) criteria do not provide an appropriate or adequate basis for assessment of the validity of SACL's entire proposal. The building blocks approach, together with the detailed factual information presented to the ACCC in the Proposal, provides a proper basis for ensuring that SACL is able to earn an appropriate return on the entirety of the aeronautical asset base which it deploys to provide aeronautical services at Sydney Airport.<sup>137</sup>

Following the submission of the revised proposal, SACL addressed the NNI criteria in a letter to the Commission. SACL maintained however that addressing the criteria was of little benefit to the assessment process.

BARA's approach was to assess capital expenditure incurred after 1 July 1998 in terms of the NNI criteria.

In Section 9.4 of its submission, BARA identified assets to the value of \$105.93 million that it regards as not falling within the definition of NNI.

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<sup>137</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.27.

## 6.2 The legal framework

### 6.2.1 Relevant criteria

Pursuant to section 20 of the PS Act and paragraph (2) of Direction No. 18, the Commission is required to give special consideration to the use of the following criteria “to guide its assessment of proposals to increase charges for declared services as a result of necessary new investment”. The criteria are as follows:

- (a) the operator's plans for new investment or service innovation and the associated costs;
- (b) the relationship between the proposed increases in aeronautical charges and the costs (including the level of the rate of return) of the new investment or service;
- (c) support from airport users with a significant interest in the investment for the operator's proposals, including in relation to charging changes;
- (d) contribution of the new investment/service to productivity improvements at the airport;
- (e) overall efficiency of the airport's operation;
- (f) the particular demand management characteristics of individual airports, including any demand management schemes in place, capacity constraints and any under utilisation of the airport infrastructure;
- (g) airport performance against quality of service measures, including services under the control of the airport operator;
- (h) airport performance vis a vis other Australian airports and any comparable international airports; and
- (i) the extent to which the proposed investment will facilitate the operations of new entrants to domestic or international aviation.

Direction No. 18 further states –

While the ACCC must take the above into account in deciding whether to approve a proposal to increase charges, in relation to new investment, each proposal will be considered on its merits having regard to the information available to the ACCC. The weight provided by the ACCC to each of the criteria may vary on a case-by-case basis.

The Commission has set out in chapter 2 its approach to the interpretation of Direction No. 18, and in particular its relationship with section 17(3) of the PS Act. The Commission considers the section 17(3) criteria are fundamentally relevant to the consideration of the new investment component of the SAFL proposals.

In Chapter 3 the Commission set out the reasons for its view that the legislative regime does not prevent the Commission from adopting a building block approach, in which both pre-existing assets and new investments are taken into account, as a means of assessing the matters referred to in paragraphs (a) and (b) of Direction 18(2).

### 6.2.2 “New investment”

BARA argues that “it is also necessary for the Commission to assess the timing of new investment expenditure”.<sup>138</sup> It then refers to the Commission’s decision in October 2000 in relation to Melbourne Airport.<sup>139</sup>

BARA does not argue that the SA2000 investments do not qualify as “new” investment even though they were (or may have been) committed to, or the subject of contracts, prior to the Commission’s decisions in September 1997 or July 1998.

On the contrary, BARA seems to argue that whether or not an investment is “new” depends on whether the expenditure in relation to that investment was “incurred prior to the date of acquisition of the lease of Sydney Airport by SACL”.<sup>140</sup> This therefore requires the Commission to ascertain the component of the expenditure on the SA2000 project that was incurred prior to that date.

In the Commission’s view the legislation does not require the Commission to adopt this approach. An interpretation of the term “new investment” that accords with the apparent purpose of the regime is whether the costs of the investment are already included in the current price for the service (or, if the investment is to establish a new service, whether or not that service is already being provided). An appropriate approach in these circumstances is to determine whether the investment has already been the subject of an assessment under section 22(2)(b) of the Act. This enables the SA2000 investments to be considered as new investments for the purposes of Direction No. 18.

The Commission therefore has not focused on the time at which the expenditure was made, but rather on whether the investment expenditure had already been the subject of a decision in relation to a proposal to increase prices under the PS Act. Given that the Commission’s decision in July 1998 did not determine the question of the costs related to the SA2000 project, this would require classification of the whole project as “new”.

### 6.2.3 Onus

BARA argues that the “onus” is on SACL to demonstrate that the investments are “necessary new investments” within the meaning of Direction No. 18.<sup>141</sup>

In the Commission’s view neither section 17(3) nor Direction No. 18 requires the Commission to be “satisfied” of certain matters. They simply require the Commission to have regard to certain matters or criteria. Provided it gives those matters real consideration, it is up to the Commission to determine the weight to be given to each matter and the evidence required to form a view in relation to each matter.

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<sup>138</sup> Board of Airlines Representatives of Australia, (1) op. cit., pp. 72-73.

<sup>139</sup> See, Australian Competition and Consumer Commission, (10) *Australia Pacific Airports (Melbourne) Pty Ltd: Range of Projects New Investment Decision*, October 2000.

<sup>140</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 79-80.

<sup>141</sup> *Ibid.*, p. 76 and chapter 9 generally.



## 6.3 Commission Assessment

### 6.3.1 (a) The Operator's Plans for New Investment or Service Innovation and the Associated Costs

As stated in by the Commission in the Adelaide Airport MUIT Decision:

The Commission's understanding of this criterion will focus on the costs associated with the new investment. As the application process deals only with charges for aeronautical services, it is the costs associated with the provision of aeronautical services that are regarded as relevant. The airport operator is therefore effectively required to conceptually separate the airport facility into its aeronautical functions and its non-aeronautical functions. The Commission will assess the methodology which the airport operator has used to effect this separation of aeronautical and non-aeronautical costs.

The associated costs of the new investment means those costs which the airport operator expects to incur which are in excess of those incurred currently. That is, airport operators will only be allowed to recover the amount of any net increase in costs resulting from the investment.<sup>142</sup>

In relation to the appropriate measure of costs, the BARA submission states that:

Whilst BARA agrees that actual project costs may be an appropriate asset valuation methodology for new assets at Sydney Airport BARA is of the strong view that if actual costs are used they must be transparent and include only efficiently incurred costs... BARA is concerned that in the case of SACL no mechanism whatsoever has been in place to ensure that SACL's SA2000 Project costs were efficiently incurred. Control over actual Project costs has rested solely with SACL.<sup>143</sup>

BARA is correct in noting that the Commission in considering NNI proposals generally looks at actual costs and considers whether those costs have been efficiently incurred. It follows that an ODRC valuation of those assets, although potentially susceptible to a greater degree of subjectivity, can act as a control on actual costs that were incurred inefficiently. As BARA recognises in its submission, "In theory, efficiently incurred historic costs and replacement costs should be the same at the time of construction".<sup>144</sup>

In responding to this criterion SACL noted that cost details were provided at section 5.3 of the draft pricing proposal, section 6.1 of the revised proposal and in the financial models. Regarding service innovation, SACL referred to section 7.3.1 of the revised proposal and the results of passenger surveys that the company has commissioned. SACL claims the survey results indicate generally increased passenger satisfaction with the quality of service offered when compared to the results of the same survey a year earlier. Regarding the efficiency of costs forecast to provide this service, SACL refers to section 7.5 of the draft pricing proposal which describes forecast operating expenses.

The Commission's view is that the ODRC valuation of the SACL asset base, which includes the new investment, represents a reasonable valuation of efficient costs for the component of the asset base that represents the new investment.

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<sup>142</sup> Australian Competition and Consumer Commission, (5) op. cit.

<sup>143</sup> Board of Airline Representatives of Australia, (1) op. cit., p.81.

<sup>144</sup> Ibid.

### **6.3.2 (b) The Relationship Between the Proposed Increases in Aeronautical Charges and the Costs (including the level of rate of return) of the New Investment or Service**

Specific reference is made in this criterion to the level of rate of return to be considered as part of the cost of an investment.

SACL refers to the information contained in the draft proposal and the revised proposal to establish the relationship between the proposed aeronautical charges and the total cost of providing aeronautical services. In a letter to the Commission, SACL noted however that,

It is inherent in the comprehensive nature of SACL's proposal and the adoption of the building block approach that SACL's proposed increases in charges are not directly attributable to the costs of the SA2000 and other recent investment projects. Rather, the proposed price increases are correlated with the total value of its aeronautical asset base.<sup>145</sup>

BARA's view is that "SACL's proposed cost of capital significantly exceeds the commercial return required for investments in aeronautical assets at Sydney Airport" and that "the ACCC (should) take into account the total rate of return on SACL's investment and not just the rate of return on the aeronautical component of the new investment".<sup>146</sup> These views are expanded upon, and the Commission's conclusions presented, in the sections discussing the dual till and cost of capital (see chapters 4 and 10 respectively).

The Commission notes that SACL has not provided information that specifically identifies how the costs of the investment made after 1 July 1998 relate to the proposed aeronautical charges. This does not however preclude the Commission from making a decision regarding the appropriateness of the aeronautical charges and the total cost of the aeronautical assets employed, including the investment that took place after 1 July 1998, in providing aeronautical services. The Commission's draft decision, detailed elsewhere in this document, is that efficient prices can be derived based on an analysis of SACL's total aeronautical assets. Given that the investment made after 1 July 1998 is incorporated in that analysis, the Commission's draft decision is that there exists sufficient control over the potential for SACL to earn an unreasonably high rate of return on that new investment.

### **6.3.3 (c) Support from Airport Users with a Significant Interest in the Investment for the Operator's Proposals, Including in Relation to Charging Changes.**

In considering proposals against the NNI criteria the Commission normally attaches much importance to the views of airport users. It is these users that are particularly well placed to provide commentary on the appropriateness of an investment and to provide an indication as to whether a proposed project has been subject to "gold plating".

In a letter to the Commission, SACL refers to section 5.3.1.5 of the draft proposal which notes various forums in which the SA2000 project had been discussed. SACL further notes that there is "...little, if any, incentive for airline customers to express support for projects

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<sup>145</sup> A copy of the relevant extract from a SACL letter that discusses the necessary new investment criteria is available from the Commission upon request

<sup>146</sup> Board of Airline Representatives of Australia, (1) op. cit., pp.82-83.

that are already committed and/or completed”.<sup>147</sup> The BARA submission details wide-ranging complaints regarding a lack of consultation and arguing that airline agreement to the SA2000 project was based on an understanding that the project would not be funded through increases in aeronautical charges.

The Commission’s experience in assessing NNI applications from airport operators has been that user support is difficult to determine in retrospect. There may indeed be an economic incentive for users to dispute having agreed to projects in order to avoid associated aeronautical charges. Given the conflicting views of BARA and SACL on matters of fact the Commission is not in a position to comment about the relative merits of either SACL or BARA’s position on this point. The Commission also understands that the respective views of BARA and SACL are sufficiently contentious as to be tested in another forum. Further, it is noted that much of the discussion that would normally be associated with establishing user support and satisfying this criterion was conducted prior to 1 July 1998. During the period to 1 July 1998, Sydney Airport’s previous operator, the Federal Airports Corporation, was not the subject of regulatory instruments that set out the criteria now contained in Direction No. 18. Therefore, in its consideration of the SACL proposal, the Commission has accorded this criterion less weight.

#### **6.3.4 (d) Contribution of the New Investment/Service to Productivity Improvements at the Airport; and (e) Overall Efficiency of the Airport’s Operation**

Of importance under these criteria is the impact on efficiency that the new investment is likely to have. The Commission’s understanding of efficiency as it applies to SACL is set out in Chapter 4, above. Efficiency is an important objective for both airport operators and users. Measurements of existing efficiency levels may be compared against projected efficiency measures expected to flow from the new investment to demonstrate this point.

SACL has referred to section 7.5 of the draft proposal, which discusses anticipated efficiencies in operating expenses, as evidence that productivity improvements are incorporated in the proposed prices. SACL also refers to improved results in quality surveys presented at section 7.3.1 of the revised proposal.

A submission from the NSW State Chamber of Commerce broadly indicates the Chamber’s support for Sydney Airport and states:

The airport also performed efficiently during the Olympic period when record passenger numbers were experienced both departing and arriving.<sup>148</sup>

In regard to the efficiency and productivity criteria, BARA states that:

BARA has been provided with insufficient information regarding the increase in productivity and efficiency anticipated by SACL in designing and approving the SA2000, Parallel Capital Works and Other projects. On the basis of the limited information available BARA considers that the projects have not been designed or delivered efficiently as discussed above and that the timing of projects has not been properly optimised.<sup>149</sup>

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<sup>147</sup> A copy of the relevant extract from a SACL letter that discusses the necessary new investment criteria is available from the Commission upon request.

<sup>148</sup> NSW State Chamber of Commerce, *Submission re: Sydney Airport*, December 2000.

<sup>149</sup> Board of Airline Representatives of Australia, (1) op. cit., p.83.

The Commission notes that sufficient information does not exist that would allow a specific identification of how the capital expenditure made by SACL since 1 July 1998 has affected efficiency and productivity. However, as discussed at section 6.3.2, above, the Commission is able to draw some conclusions from the broader analysis carried out in elsewhere in this draft decision. As a result of the broader analysis the Commission's draft decision is to not object to aeronautical charges that incorporate adjustments for efficiency and productivity. Such adjustments can be seen in the Commission's views regarding, for example, the dual till, asset optimisation, assumed productivity improvements in operating expenses and price smoothing. Given that efficiency and productivity issues have been assessed by the Commission on a broad base, and that base includes the investment made by SACL since 1 July 1998, the Commission's draft decision is that sufficient control has been exercised over inefficient investment.

### **6.3.5 (f) The Particular Demand Management Characteristics of Individual Airports, Including Any Demand Management Schemes in Place, Capacity Constraints and Any Under-utilisation of Airport Infrastructure**

Under this criterion, the Commission seeks information on whether any demand management schemes in place support the case for new investment. Similarly, an assessment is made about the extent of current and prospective capacity constraints of the airport and/or terminal, and whether the new investment will ease pressure on these constraints, and improve capacity. Conversely, the new investment could address a demonstrable situation of under-utilisation of airport infrastructure.

Interested parties did not specifically comment on this criterion. In commenting on quality issues, the BARA submission noted that "...facilities at Sydney International Airport have been enhanced as a result of the (SA2000) Project, (although) the Project is a less than optimal outcome for the airlines".<sup>150</sup>

SACL has referred to section 2 of the draft proposal for a discussion of demand management issues. Section 8 of the draft proposal sets out SACL's view of how the proposed prices represent a move towards providing signals to users about the use of scarce resources. That section also notes however that the proposed prices represent only a first step towards charges that can manage demand as the airport becomes congested.

The Commission's view is that the capital expenditure at the airport has added to the capacity for aeronautical services. Under-utilisation of airport infrastructure is generally not observed at Sydney Airport.

### **6.3.6 (g) Airport Performance Against Quality of Service Measures, Including Services Under the Control of the Airport Operator; and (h) Airport Performance vis à vis other Australian Airports and any Comparable International Airports**

The assessment of these criteria entails an ascertainment of the quality problems characterising the current situation, and how the proposed new investment takes steps to redress and improve the situation. The assessment will also focus on how the new investment

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<sup>150</sup> Ibid., p.96.

assists in improving standards to a level comparable with other airports. The Commission is interested in parties' views on how the investment achieves these goals.

SACL has submitted to the Commission the results of customer perception surveys that report on the quality of service. The Commission will publish a summary of these results, plus other information and analysis, in the 1999-2000 Regulatory Report for Sydney Airport.

The BARA submission (in particular, Section 12) argues strongly that

BARA considers that the quality of service provided by SACL at Sydney International Airport from when it began operating the airport until completion of the Project in June 2000 has been less than adequate. Additionally, SACL has not achieved improvements in capacity or quality which it should have achieved for the expenditure which it is seeking to recover from airlines...

There is considerable evidence that the quality of service delivered by SACL is below that achieved by other major airports in Australia.<sup>151</sup>

The Commission's view, having assessed the results of the most recent customer perception surveys and airline surveys, is that the quality problems set out in the BARA submission do not necessarily reflect the universal experience of all airport users. The preliminary results of the customer surveys indicate that passengers were generally satisfied with most aspects of the facilities and services provided at Sydney Airport. The reported experience of the airlines however is more varied, with perceptions of the quality of some services ranging from "excellent" to "very poor". The Commission notes the examples given by BARA (at section 12 of the BARA submission) of instances where the new investment would have probably had a negative impact upon the quality of service experienced by passengers but for additional services provided by the airlines. The Commission does not therefore agree with the SACL statement that:

There is no doubt that the investment undertaken by SACL over the past two years has significantly improved the quality of services at Sydney Airport...<sup>152</sup>

While it appears there is little doubt that the *quantity* of aeronautical services has increased as a result of capital expenditure since 1 July 1998, the situation regarding the *quality* of aeronautical services is not unequivocal. It is however noted that, in general, where the quantity of a facility such as a passenger terminal is expanded in order to relieve or avoid congestion the quality of that facility experienced by its users is also increased.

Regarding comparisons of SACL's performance with that of other Australian and international airports, SACL and BARA have presented opposing points of view. SACL put forward the following as evidence that Sydney Airport performs well when compared with other airports:

- named Australian Airports Association "Major Airport of the Year" in November 2000;
- received a special commendation from Airports Council International Board meeting in November 2000 in recognition of Sydney Airport's role in the Sydney 2000 Olympic and Para-Olympic Games;
- the information contained in the ACCC Regulatory Reports; and

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<sup>151</sup> Ibid., pp.83,84

<sup>152</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.145.

- the report of the Transport Research Laboratory.

Details of the SACL view are presented at sections 2.3.2, 7.5 and Appendix H of the draft proposal and section 6.3 of the revised proposal.

BARA presents its view regarding the quality of service offered by SACL relative to other airports in section 12 of its submission. BARA's view may be summarised as follows:

There is considerable evidence that the quality of service delivered by SACL during the SA 2000 Project has been below that achieved by other major airports in Australia, has deteriorated from the service provided by the FAC prior to commencement of the Project and has been below the level necessary to enable the airlines to provide a desired level of service to their customers without incurring significant additional costs. As explained in chapter 3, while facilities at Sydney International Airport have been enhanced as a result of the Project, the Project is a less than optimal outcome for the airlines.<sup>153</sup>

BARA, in section 18 of its submission, also analysed the operating efficiency of SACL relative to other Australian airports. It concluded that operating expenditure at Sydney Airport would have been significantly lower if it had achieved efficiency gains similar to those reported by Brisbane, Melbourne and Perth airports over the four years to June 1999.

The Commission notes the complications in determining comparable performance measures for airports. The analysis of these measures is complicated due to inherent difficulties in comparing foreign-based airports to Australian airports, and comparing Sydney Airport (which has a constrained site, experiences congestion and has recently undergone a capacity expansion) to other Australian airports. Given these complications, the Commission's view is that a conclusive case can not be made that proves that Sydney Airport's performance is inadequate when compared with other Australian and international airports. The Commission's consideration of the efficiency of SACL's operating expenses is contained in Chapter 9.

### **6.3.7 (i) The Extent to which the Proposed Investment will Facilitate the Operations of New Entrants to Domestic or International Aviation**

The Commission will regard favourably a new investment proposal which will facilitate the operations of new entrants to domestic or international aviation.

Interested parties did not comment on this criterion.

In a letter to the Commission, SACL claimed that:

The overall infrastructure at Sydney Airport, including as enhanced by the SA2000 project, has been vital to the commencement of national operations by Impulse and Virgin Blue, and a number of new international operators. Particularly in light of enhanced facilities at the international terminal, Sydney Airport is extremely well placed to facilitate the entry of further new operators and is actively seeking to do so.<sup>154</sup>

The Commission notes that the capital works undertaken by SACL since 1 July 1998 have included additional gates and parking facilities. This would appear to assist the airport to accommodate new entrants.

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<sup>153</sup> Board of Airline Representatives of Australia, (1) op. cit, p.101.

<sup>154</sup> Extract from letter from Don Huse, Chief Financial Officer, SACL to the Commission dated 16 November 2000.

## 6.4 Commission draft decision

In essence, SACL is proposing a set of starting point prices from which future increases based on new capital expenditure will be subject to the NNI criteria. In this sense, the starting point prices would have a similar status to the prices in place at other Australian airports upon their privatisation. It is clear however that the price levels between the privatised airports' starting point prices and SACL's proposed starting point prices are not directly comparable. The SACL approach to developing aeronautical prices has been prompted in part by previous concerns expressed by the industry and the Commission regarding the appropriateness of asset values, depreciation policies, cost allocation and rates of return adopted by Sydney Airport's previous operator, the FAC. The Commission therefore assessed SACL's proposal more in the context of determining an efficient set of prices rather than a proposed price increase related solely to investment undertaken between 1 July 1998 and 1 July 2000. The Commission has considered the NNI criteria and is of the view that they are mostly addressed within the application of the building block approach contained in the proposal put before it.

In the Commission's view there are difficulties in using the necessary new investment criteria set out in Direction No. 18 to make a retrospective assessment of historic investments made by an airport operator. This is particularly borne out in the current matter in the disagreement regarding whether the users supported the SA2000 project and associated developments. There are also information difficulties in measuring efficiency and quality as it relates to the SACL's post-1 July 1998 investment. The Commission's view is that these difficulties may be mitigated by the use of an ODRC methodology and an analysis being performed on the broader cost base, which includes the new investment. For example, applied correctly, an ODRC valuation represents a "check" on the efficiency of the investment by giving "unnecessary" investment a zero value in the optimisation process.

The Commission's view is that SACL, in addressing pricing and cost issues across its entire asset base, has indirectly addressed the NNI criteria. The Commission's own analysis and draft decision regarding SACL's application of the building block approach will ensure that the investment made by SACL since 1 July 1998 is appropriately reflected in aeronautical charges. The Commission's draft decision is that the NNI criteria have been addressed.

## ■ Chapter 7: Land Valuation

### 7.1 Introduction

The valuation of assets presents particular challenges in the context of determining prices for a regulated activity. A crucial point is articulated in the DRP:

In determining an appropriate asset valuation methodology economic principles and analysis do not provide an unambiguous decision rule for the valuation of sunk assets. Rather economic principles provide lower and upper bounds – scrap value and replacement cost. Within these bounds there is opportunity for regulatory judgement.<sup>155</sup>

In exercising this judgement, the Commission has adopted the methodology of Optimised Depreciated Replacement Cost (ODRC or DORC) for setting the upper limit to the valuations of specialised assets. The reasons for adopting this approach are set out in the Commission's DRP.

The principles of the DORC methodology can be applied to the question of land value. However, certain unique characteristics of land, as opposed to other fixed assets, necessitate a different approach to the application of DORC. Land does not depreciate and is not subject to technological obsolescence. Furthermore, unlike SACL's other assets, it has an alternative use; that is, it is not specialised.

In light of these special characteristics, there are a number of possible approaches to the valuation of land. One valuation approach is to use the present value of the asset's cash flows. However, in the regulatory context this is circular, as the asset value is being used to determine revenues, which are a determinant of the present value of the cash flows. Accordingly, an alternative approach is required.

The two main approaches which the Commission has considered are opportunity cost valuation and historic cost. This chapter reviews SACL's approach before considering each of these valuation methods and outlining the Commission's preferred approach.

### 7.2 SACL's Proposal

SACL classifies aeronautical assets as 'non-specialised assets' (assets which are normally traded in an open market where market based price indicators are available) and 'specialised assets' (which are not tradeable except as part of a total enterprise). SACL argues that land, unlike other aeronautical assets, is not specialised and that an opportunity cost approach to valuation is appropriate. SACL uses 'market valuation' as an approach to estimating this opportunity cost. All other aeronautical assets are classified as specialised and are valued using an ODRC methodology, as discussed in the preceding sections.

SACL justifies the inclusion of land in its proposal on the following basis:

- valuing the land according to its alternative use provides the economic signal for efficient decisions regarding the continuing use of the land as an airport, compared with the cost of

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<sup>155</sup> Australian Competition and Consumer Commission, (3) op. cit., p.39.



an airport based further out of the city, with cheaper land, but increased costs in travel time etc;

- the Commonwealth, as a rational investor, would only continue to use Sydney Airport for aviation purposes if it could not achieve a higher return from an alternative use – even if SACL were a private sector lessee, a mutually beneficial arrangement could be negotiated with the owner of the freehold (the Commonwealth) to return or relocate the lease if returns are not appropriate;
- any possible future airport in the Sydney basin would be unable to compete with Sydney Airport as the cost of the latter’s locational advantage is not reflected in current aeronautical charges; and
- the lessee of Sydney Airport is otherwise provided with a strong incentive to ‘squeeze’ aeronautical services by using the maximum possible amount of land for non-aeronautical activities in order to capture the current value of the underlying land.<sup>156</sup>

SACL’s approach considers the ‘market value’ under possible alternative uses for the land. Their valuation was conducted by Jones Lang LaSalle Advisory. The approach adopted and the valuation proposed are explained in section 1. 3.

## **7.3 Opportunity Cost**

### **7.3.1 Introduction**

In a competitive market, land will generally be put to its highest value use. If not, then the opportunity cost of the land will be greater than the value in its current use and the owner will have an incentive to use the land for the higher value alternative, or sell the land to another party who will use the land for the higher value alternative.

The same principles apply to regulated businesses. In practice, though, their application is not straightforward. The difficulty that arises in the regulatory context is that the regulator cannot observe whether the land is actually in its highest value use, as this value is determined by the charges the regulator allows. Similarly it may not be straightforward to determine what the opportunity cost of the land is.

This section first considers the views of interested parties, then considers SACL’s application of the opportunity cost concept.

### **7.3.2 Views of Interested Parties**

Submissions to the Commission from operators of the privatised airports were broadly supportive of SACL’s approach to land valuation. Brisbane Airport supports the opportunity cost principle but believes the parameters selected by SACL in its valuation lead to a notable underestimation of aeronautical land value. Melbourne Airport supports the inclusion of land in the regulatory asset base on an opportunity cost basis, but suggests that the land should be treated as leasehold rather than freehold. WAC also endorses SACL’s opportunity cost approach.

Airport users generally opposed SACL’s inclusion of land in the aeronautical asset base for pricing purposes. The BARA submission outlines a number of arguments against SACL’s

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<sup>156</sup> Sydney Airports Corporation Ltd, (1) op. cit. Executive Summary, p.ix.

proposal.<sup>157</sup> It argues that since SACL is constrained by legislation to use the site as an airport the opportunity cost of land at Mascot is zero. BARA also argues that SACL's proposal would result in a substantial transfer from airport users to SACL with no corresponding efficiency gain.

BA and IATA expressed their endorsement of BARA's submission and reiterated the major points. OAOA and the RAAA also endorsed the arguments of BARA, while Impulse Airlines was supportive of SACL's proposal.

### 7.3.3 Application of the opportunity cost principle

Whilst opportunity cost is in principle an appropriate approach to valuing land, its application is not straightforward. There are several possible approaches to estimating the opportunity cost, of which SACL's method is one. For example, in previous airport pricing proposals, the FAC valued land capped at a light industrial valuation. In its submission to the Commission, Brisbane Airport argues that while the opportunity cost approach is appropriate in principle, a direct comparison method based on market transactions is the best estimation technique.

The following discussion considers the *application* of an opportunity cost approach in the context of SACL's proposals. The approach adopted is to consider the signals that SACL's proposed land valuation send for efficiency. The Commission has done this by assessing the effect of SACL's proposals on the following:

- signals to operate the site as an airport;
- signals for relocation;
- signals if there were a second airport;
- signals for use of land in aeronautical or non-aeronautical uses; and
- incentives for new investment.

In turn these effects are considered against the objectives set out in section 2.2. The first of these objectives is that "the cost base under consideration is efficient". In the context of land an important issue in considering the efficiency of the cost base is whether the land valuation and prices proposed send appropriate signals to either continue operating the site as an airport or to relocate the airport. Similarly the prices may send signals for use of land in the provision of aeronautical or non-aeronautical services or use of an alternative airport if there were a second airport.

The second objective set out in section 2.2 is "the airport operator faces appropriate signals for new investment decisions". This is addressed directly in the discussion that follows.

The third objective is that "airport users receive appropriate signals for the efficient use of airport services". This is addressed in the discussion about congestion management in section 7.5.

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<sup>157</sup> The BARA proposal was explicitly endorsed by IATA, BA and OAOA in their submissions to the Commission. To avoid duplication, each of these parties referred to the BARA submission for a substantive critique of SACL's proposal.

The fourth objective is that the airport operator earns a reasonable rate of return but does not accrue monopoly rents. This is considered as part of the discussion about signals for efficient use of land.

#### **7.3.4 Efficiency – signals to operate the site as an airport.**

SACL suggests that its approach is an opportunity cost approach and that ‘the current value of land must be reflected in charges for efficiency and equity reasons’<sup>158</sup>. It argues that its valuation of land provides an efficient pricing signal regarding the continuing use of land as an airport.

By contrast BARA argues that SACL’s approach does not reflect the opportunity cost of the land, as SACL has no discretion over the use to which it is put. BARA suggests that given the legislative restrictions in place the opportunity cost of land at Mascot is zero. That is, SACL requires no additional revenue as an incentive to continue providing aeronautical services on the land.

According to BARA, SACL’s land valuation is not a necessary condition for efficient decision-making with regard to either the use of land for aeronautical/non-aeronautical services, the allocation of scarce capacity or the expansion of capacity elsewhere in the Sydney basin. Furthermore, BARA argues that valuing existing land at anything above zero is inconsistent with earlier Commission decisions on Brisbane, Melbourne and Canberra airports.

BARA’s argument only applies if SACL is the relevant decision maker. In practice, and as argued by SACL, the Commonwealth owns Sydney Airport and could change the legislative requirement limiting use of the site to an airport. SACL goes on to argue that the land on which Sydney Airport is situated would only be used by the Commonwealth for aviation if this use provides higher returns than any alternatives.

Even if the Commission were to accept SACL’s position that the Commonwealth as the relevant decision maker would only consider the private costs and benefits associated with the use of the land, it is not clear that SACL’s approach is a reasonable measure of the opportunity cost of the site. As argued by BARA, the inclusion of holding costs and the exclusion of any demolition or site clean-up costs in the estimation of the land value suggests that SACL has overstated the opportunity cost of the Mascot site.

Advice from NECG supports SACL’s position that the Commonwealth is the relevant decision maker, but questions elements of SACL’s proposal. NECG contends that SACL has not conclusively demonstrated that there is an efficiency gain from the inclusion of a return on land valued at opportunity cost. NECG argues that aeronautical land has an opportunity cost only if a replacement or second airport is contemplated:

If no second airport is contemplated or an additional airport is to be built but will not operate as a substitute for Sydney airport, then it is *inconceivable* that the Commonwealth would choose to close SACL and realise the value of the land at Mascot. Hence there is no opportunity cost associated with SACL land. In this case the land must be considered as a sunk cost.<sup>159</sup>

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<sup>158</sup> Sydney Airports Corporation Ltd, (1) op. cit., p.x.

<sup>159</sup> Network Economics Consulting Group, (2) op cit., p.7.

The Commission considers that it is appropriate to consider the Commonwealth, the airport's owner, as the relevant decision maker. However the Commission considers that it is unlikely that profit maximisation is the Commonwealth's main objective. Rather, the Commonwealth is better considered as having a broader set of objectives. This has implications for the costs and benefits which form the basis of the land use decision. As suggested by NECG, the scenario of the Commonwealth closing the airport without establishing an alternative does not seem credible. Given this it seems more appropriate to consider opportunity cost in the context of relocation of the airport.

### **7.3.5 Efficiency – signals for relocation**

The Commonwealth has ruled out a decision to establish Badgery's Creek as a second or alternative airport in the next five years. Nevertheless the pricing proposals are likely to have implications beyond this five-year period, so consideration of their longer-term implications is warranted.

The Commission sought advice from Dr Rohan Pitchford and NECG on the value of land if relocation of the airport is an option.

Dr Pitchford accepts SACL's argument that opportunity cost is an appropriate approach to valuing aeronautical land but disagrees with SACL's application. Specifically, he disputes the use of surrounding land value as the determinant of opportunity cost, as SACL is not selecting the appropriate 'rejected alternative'.

By focussing only on the proceeds of selling the land, SACL takes no account of the fact that if the land were actually sold, the appropriate opportunity cost measure should also include the realistic costs and benefits of moving and building the new airport. These costs include road infrastructure and other supporting services. The benefits include assessment of better quality services and fewer externalities.

Dr Pitchford suggests that the ideal approach is to work backwards from efficient prices to derive the value of land as a residual. The difficulty identified with this method is that consumer valuations are unobservable, and difficult to quantify in an imperfectly competitive market. Accordingly, the following criteria are suggested with regard to valuation of aeronautical land:

*Revenue attributable to land be set considering that*

- I. additional land parcels are valued at their price at the time of purchase
- II. prices for airport services are set as low as possible, accounting for the constraint that prices are efficient as possible and subject to; (i) reasonable maintenance costs being covered, and (ii) a reasonable return on additional land purchases is received.<sup>160</sup>

Criterion I is designed to provide the correct incentives for SACL to buy and sell land at the margin, given that the airport remains at its current location. Criterion II is directed towards using estimates of users' valuations to impute a value for pre-existing land.

NECG considers that if a decision is made to relocate the airport, then it is pertinent to ask who will make the decision. If the government makes the decision as a social planner then the

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<sup>160</sup> Rohan Pitchford, *Sydney Airport Land Valuation: An Assessment*. A copy of this report is available on the Commission's website at <<http://www.accc.gov.au>>.

inclusion of a commercial return on the value of land will not significantly influence the decision. Any decision made by the government will have to consider third-party effects, that is, take on a full social cost-benefit analysis, which would include environmental costs/benefits of operating the new airport and of reducing/removing traffic at Sydney, constructing road links to the new site, the effects on other industries such as the taxi industry and the extra travel time for CBD bound passengers. If the decision is made by SACL then it will not face the same incentives as the government, and is therefore unlikely to internalise all of these costs.

As a starting point, NECG agrees with SACL that DORC is an appropriate valuation methodology in the case of there being an alternative to Sydney airport. However, it disagrees with the application of the optimisation principle. While SACL looks at optimisation as 'in situ' replacement cost, that is, the next best use within the existing location, NECG consider optimisation in terms of an optimally located airport providing the same services as SACL. According to NECG:

...the Commission should adopt the efficient replacement cost which...is likely to be represented by a green field airport sited on relatively cheap land...This would ensure that the revenue stream to SACL was just sufficient to ensure it could continue to provide the service capability required, that capability being supplied in the manner that minimised costs going forward.<sup>161</sup>

An efficient valuation methodology would then involve adjusting this DORC valuation for third party effects mentioned above.

Thus, NECG argue that the constraint on asset values inherent in DORC - ie, that the NPV of revenues expected to be earned should be no more than the efficient long run costs of supply - essentially refers to the minimum efficient costs of an optimally sized, optimally located airport providing the same services as SACL. This is the highest valuation that would be possible in a competitive market and still prevent inefficient by-pass.

This approach is likely to rule out in situ replacement cost as proposed by SACL, unless that is demonstrably least cost. Instead, the objective should be efficient replacement cost associated with a greenfield development of an airport on relatively cheap land. That is, land valuation should be on the basis of opportunity cost of land at Badgery's Creek rather than the higher cost of land currently used at Sydney Airport.

As discussed above, the Commission considers that for purposes of this assessment it is appropriate to think of the Commonwealth as the relevant decision-maker taking into account a wide range of issues. These could include the costs of relocating the airport, the costs of providing infrastructure to service the new airport as well as less tangible considerations such as the costs and benefits of relocation on airport noise and travel times. Since a complete assessment of such matters is complex, and the magnitude of the components of the calculation is likely to change over time, the merits of using a full opportunity cost valuation should be weighed carefully against alternative approaches and is considered well beyond the scope of this draft decision.

SACL has proposed an estimate of the market valuation of the land (plus holding costs). Its assessment does not take into account factors external to SACL. Furthermore the approach

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<sup>161</sup> Network Economics Consulting Group, (2) op. cit., p13.

does not take into account all of the private costs and benefits facing SACL in considering a decision to relocate. Because of this the Commission is not persuaded that SACL's proposal can be considered a measure of opportunity cost.

Similarly the Commission is not persuaded that the valuation proposed by SACL sends the right signals for relocation of the airport. In fact under certain circumstances it is possible that the valuation proposed by SACL would provide a disincentive to relocate when relocation was the preferred outcome. This disincentive arises due to the fact that allowed aeronautical charges would provide SACL with a return commensurate with the alternative use rather than its use as an airport. Thus, even if it were the case that the best use of the site is the alternative use, this level of aeronautical charges would make SACL indifferent about relocating.

### **7.3.6 Efficiency - signals if there were a second airport**

One of the arguments presented by SACL in support of its proposed land valuation relates to a scenario where a second airport operates in the Sydney Basin. SACL argues that a separately owned competitive airport in the Sydney basin would be unable to compete with Sydney Airport if Sydney Airport's prices did not include capital costs associated with land. Even if a greenfield valuation were used in determining SACL's prices, SACL suggests that the second airport would still struggle to compete. SACL argues that Sydney Airport would have locational advantages, such as lower travel times from the airport to the city, that users would be prepared to pay a premium for.

In the Commission's view the fact that users may be prepared to pay a price premium for Sydney Airport does not necessarily limit the ability of an alternative airport to compete effectively. That price premium may be dependent on travel times, but as NECG points out other factors may be relevant, such as the curfew and delays due to congestion or configuration of the airport. Furthermore a new operator might have advantages compared to Sydney Airport in terms of the cost of providing services at a greenfield site.

### **7.3.7 Efficiency – signals to use land for aeronautical purposes**

SACL claims that valuing existing and new land differently gives rise to distorted incentives for the airport operator. The incentive would be to maximise use of existing land for non-aeronautical services and use new land for only aeronautical services.

Overall the Commission does not view this as providing a strong case for SACL's proposed land values. At the moment legislation limits the scope for SACL to convert aeronautical land to non-aeronautical purposes. While the Commonwealth could change these provisions it seems unlikely that it would do so if were taking the community's broader interests into account.

### **7.3.8 Incentives for new investment**

The current framework (Direction No. 18) includes provisions for SACL to recover the costs associated with new investment including a rate of return on the investment. The provisions cover land as well as other investments. They provide a mechanism to include the additional costs of land in the asset base if the land is required, for example to ameliorate congestion. The additional land could be at Sydney Airport or at another site.

Since the new investment provisions incorporate the cost of land at its purchase price, the valuation of existing land holdings should not distort new land purchase decisions.

### **7.3.9 Conclusion**

The above discussion highlights a number of difficulties in the application of an opportunity cost approach to land valuation. The Commission is not persuaded that SACL has adequately addressed these in its proposal and arrived at a reasonable measure of opportunity cost.

Certain arguments support the view that opportunity cost is zero, others that demolition costs should be incorporated. There are various possible ways to estimate the value of a vacant block at Mascot, but such valuations fail to recognise that the land has substantial specialised sunk assets constructed upon it. Furthermore, NECG argue that the opportunity cost of the land reflected in aeronautical charges is only one component of the airport location decision; a decision which, in any event, is not SACL's to make.

Even if opportunity costs could be unambiguously measured, a further difficulty arises when the assumption that the land is currently put to its best possible use is relaxed. Under this scenario, if an opportunity cost valuation is used, aeronautical charges would be set *as if* the best value use of the land is as an airport. This would provide a perverse incentive to maintain the airport at the site when the most efficient outcome would be to shut down or relocate.<sup>162</sup> In this situation, an opportunity cost approach would be inappropriate.

SACL has argued that the government legislation mandating use of the Mascot site as an airport is evidence that the best value use of the site is as an airport.

The current legal restrictions on the use of Sydney Airport land simply reflect the prevailing view of the Commonwealth that the optimal use of the existing site is as an airport, ie, the value of the land is highest in its current use.<sup>163</sup>

The Commission does not agree with SACL that this is necessarily an appropriate assumption on which to base pricing principles that will apply for some considerable length of time. Furthermore, it is the Commission's view that both the operate/not operate decision and the relocation decision are not decisions faced by SACL itself but rather the Commonwealth. As such, the Commonwealth takes into account the broad social costs and benefits flowing from such decisions, which may be substantially different from the private costs and benefits which might accrue to SACL.

## **7.4 Historic Cost**

### **7.4.1 Introduction**

In light of the complications associated with opportunity cost, the Commission considered historic cost as an alternative approach to land valuation. The Commission's consideration focuses on three issues. The first is the advantages and disadvantages of the historic cost

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<sup>162</sup> The operate/not operate decision can be seen as a subset of the relocation decision. For example, should it prove economic to cease operating an airport at the current site, it will undoubtedly be efficient to operate at some alternative site.

<sup>163</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.40.

approach *vis a vis* SACL's proposals. The second is implementation of an historic cost approach. The third is land valuation and congestion management.

#### **7.4.2 Advantages of an historic cost approach**

The discussion above concluded that the Commission is not persuaded that SACL's proposal can be considered a measure of the true opportunity cost of land at Sydney Airport. It also concluded that any such assessment would be complex and well beyond the scope of this decision.

The alternative historic cost approach has two main advantages. The first is that the historic cost of land is readily identifiable. Records on land purchases document the amounts paid. This means that the approach is significantly less subjective than the alternatives put before the Commission.

The second is that it provides compensation to the owner of Sydney Airport for investments into land already undertaken by providing a rate of return on the investments. As NECG points out, an indexed historic cost valuation of land is both necessary and sufficient to ensure the maintenance of the financial capital of SACL's shareholder.

These advantages have been recognised overseas. The historic cost approach is consistent with international precedents in the United States and, to some extent, Britain.

In general though, the Commission has not adopted an historic cost approach, instead favouring valuations based on DORC. The main reasons for this are explained in the Commission's DRP:

While historic cost, if available, offers (or appears to offer) a firmer base than DORC, there are many aspects which make it unsuitable as a method of establishing a cost base consistent between different network owners. Some issues are the following:

- inconsistent past accounting practices with respect to how much of an asset was capitalised e.g. in the past network assets had a high day labour content which was not treated in a common way between the transmission network service providers;
- the industry has been subjected to structural change which has often been done without sufficient attention to asset valuation;
- very similar assets in different networks can have different historic values due to different purchasing practices; and
- attempts to inflate historic costs to current costs are fraught with problems and will frequently result in a much higher value than a depreciated current replacement cost based on modern equipment of equivalent capacity. Because of technological improvements and economies of scale the cost in real terms of most electricity assets has fallen consistently over time.<sup>164</sup>

However, in relation to land these problems tend not to arise. In particular while technological change is important in considering the cost of purchasing plant and equipment it is not relevant in considering land.

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<sup>164</sup> Australian Competition and Consumer Commission, (3) op. cit., pp 41-42.



The Commission weighed up the advantages and disadvantages of historic cost valuation in considering the valuation of land easements for electricity transmission in NSW and the ACT, concluding in favour of historic cost.<sup>165</sup>

Some of these considerations are also relevant in considering land valuation at Sydney Airport. In practice additional factors are also relevant and have been assessed by the Commission. One is that the prices resulting from an historic land valuation may send poor signals for efficient use of land. The second, raised by SACL, is that historic cost may also limit the airport operator's ability to effectively manage congestion. Congestion management is discussed in section 7.5.

### **7.4.3 Signals for efficiency**

The Commission has assessed the implications of adopting an historic cost valuation of land against the signals for efficient use of land in assessing SACL's proposals. To assist in this the Commission sought additional advice from NECG.<sup>166</sup>

In relation to new investment, historic cost valuation of land provides appropriate signals for land purchases. The land is added to the asset base at purchase price, and the airport operator is compensated by a rate of return on the additional assets. Since land does not require periodic maintenance and has an infinite life, further compensation to the owner of land is not required.

At the time of acquisition historic cost and market value of land should be the same. Over time, however, the two valuations will tend to diverge, even if the historic cost of land is indexed. The market valuation used by SACL results in a higher valuation than indexed historic cost, suggesting that land prices have tended to increase more rapidly than the indexed historic cost of land.

Different valuations for land purchased in the past could result in different signals for use of the existing site and for relocation decisions. As discussed in the context of SACL's proposed approach to land valuation, the Commission considers the operate/not operate decision and the relocation decision are not decisions faced by SACL itself but rather the Commonwealth. In making such decisions the Commonwealth would take into account the broad social costs and benefits flowing from the decisions. On the evidence available it is not clear whether the land value proposed by SACL or the historic cost valuation would provide better signals to the Commonwealth.

In practice the differences in land valuation arising from the two approaches to valuing land are unlikely to have a material impact on these decisions given the range of issues the Commonwealth would be likely to consider. NECG's paper lends support to this view:

If this decision is taken collectively by the Commonwealth acting as a "social planner", then the inclusion in (or omission from) aeronautical charges at Mascot of a commercial return on the value of land will not influence the decision unless there is a dramatic inconsistency between the scope for setting aeronautical charges at Mascot and the scope for doing so at Badgerly's Creek airport. In principle, there is no reason for such an inconsistency, so that it is not apparent that the land valuation approach used will have any impact on this decision.

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<sup>165</sup> Australian Competition and Consumer Commission, (4) op. cit..

<sup>166</sup> Network Economics Consulting Group, (2) op. cit.

It may be the case that the Commonwealth, in taking the decision with respect to a second airport, will not act as a “benevolent social planner”. In that event, however, it is not apparent what impact, if any, the land valuation approach used at Mascot would have. There is certainly no reason to believe on *a priori* grounds that the approach proposed by SACL will encourage more efficient decision-making in such a scenario.<sup>167</sup>

In summary, the Commission is not persuaded that historic cost valuation of land will give a worse outcome than SACL’s proposed valuation in relation to the decision to operate/not operate or relocate the airport.

#### **7.4.4 Implementation**

Use of an historic cost approach to valuing land raises two issues. The first is whether to index the valuation and if so at what rate. The second is treatment of land costs that do not relate to land purchases. In Sydney Airport’s case a significant portion of land was either constructed or reclaimed.

Turning first to indexation, under a real rate of return on capital approach, the historic cost should be indexed forward. Alternatively, a nominal approach would apply a nominal rate of return to the unindexed historic purchase cost of land. Given that SACL’s building block approach is based on a real rate of return the former method is appropriate in the current case. In both instances the real capital gain on land does not need to be subtracted from allowable revenues as these revaluations are not reflected in the asset base being carried forward.

The base for indexation adopted for purposes of this decision is CPI. The attraction of CPI is that it is well documented and easy to apply. CPI has been used to index land values overseas and was used by the Commission to index electricity transmission land easement valuations.<sup>168</sup> An alternative to CPI would be to adopt a land value index. A practical limitation of this approach is that there are no published land value indexes. More fundamentally, a land value index would inflate the historic cost of land to its current market value. The Commission’s concerns with using a market valuation are discussed above.

A significant portion of the historic cost of land relates to constructed or reclaimed land. SACL classifies seawalls and landfill associated with this land as specialised assets and exclude them from the valuation of land. These classifications warrant consideration. Seawalls are a depreciating asset, which ultimately require replacement. Furthermore, in replacing these assets, it may be the case that replacement costs decline, and/or that less seawall is required than when the walls were actually constructed. Furthermore, seawalls are highly specialised, and could generally not be sold into a secondary market. The Commission therefore regards DORC as the most appropriate valuation method for these assets.

These arguments, however, do not apply to landfill. SACL has classified landfill as a non-depreciating asset, reflecting the fact that landfill does not require replacement. Landfill, like land, can also be put to alternative use. As BARA argues in its submission to the Commission, ‘...[f]or the purposes of determining economic income from land appreciation, land is land’.<sup>169</sup> Given these characteristics, the Commission believes that landfill should be

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<sup>167</sup> Ibid, p.10.

<sup>168</sup> Australian Competition and Consumer Commission, (4) op. cit.

<sup>169</sup> Board of Airline Representatives of Australia, (1) op. cit., p.126.

included as a component of land. This reclassification would increase SACL's 1 July 2000 land valuation to around \$705m.<sup>170</sup>

In January 2001, SACL provided the Commission with detailed information on the historic purchase and construction costs of land. This information formed the basis of the Commission's valuation. The information included construction and reclamation costs relating to both the north-south runway (finished around 1972) and the third runway (completed in 1994-95). These costs appear to relate to both seawalls and landfill. Accordingly, the Commission adjusted the figures provided by SACL to avoid a potential double counting of the sea wall assets. The adjustment was estimated using the Maunsell McIntyre valuations of seawalls, which was \$160.4m as at 1 July 1998. The amount was indexed forward to 1 July 2000 and subtracted from the total figures provided by SACL. All landfill costs are classified as aeronautical. In estimating the historic cost of landfill, therefore, historic construction costs rather than purchase costs are included.

SACL also advised the Commission that the historic land cost information provided is incomplete. Consequently, for the purposes of the draft decision, the Commission has included a \$100m contingency in the valuation of aeronautical land at Sydney Airport.

#### **7.4.5 Conclusion**

The above discussion highlighted a number of practical advantages in using historic cost in preference to opportunity cost for the purposes of valuing land. Furthermore, the Commission is not persuaded that the adoption of such an approach will result in outcomes that are any less efficient than those under SACL's proposal.

In particular, the Commission's view is that the using a land valuation based on historic cost will not materially affect the Commonwealth's decision to operate at Mascot or relocate SACL's operations to an alternative site.

An historic cost valuation is also consistent with the Commission's decisions in relation to new investment at privatised airports. In this respect SACL faces appropriate incentives with regard to the expansion of capacity.

### **7.5 Land Value and Congestion**

#### **7.5.1 Introduction**

Congestion is an important issue for Sydney Airport, with a number of peak hours already fully occupied. The Commonwealth Government's decision not to proceed with a second airport at Badgery's Creek at this stage means that effectively managing congestion at Sydney Airport will become increasingly important over the next few years.

SACL argues that the land valuation adopted in this decision will have important implications for the airport operator's capacity to address congestion at Sydney Airport. This section considers the issue, first reviewing the arguments presented by SACL and other interested parties, then considering the interaction between price levels and price structure.

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<sup>170</sup> While this figure includes the value of landfill, it excludes the value of seawalls.

## 7.5.2 Views of Interested Parties

SACL has argued that the inclusion of land in the regulatory asset base will assist in preventing congestion at Sydney Airport.

If prices at Sydney Airport are set below their economic value, airlines will not have appropriate signals to use the airport facility efficiently. Prices set at a level below the opportunity cost of providing the service, will lead to excessive demand for the facility and increased congestion (eg, through airlines scheduling smaller, more frequent flights).<sup>171</sup>

SACL recognises that a slot auction system would be the optimal method for allocating scarce capacity, but argues that its implementation is too complex to be a practical solution. Rather, SACL justifies its pricing proposal – and particularly its land valuation – on the basis that the proposed price increases choke off excess demand and prevent inefficient overexpansion of facilities.

The submission provided to the Commission by Melbourne Airport expresses a somewhat different view, arguing that ‘the policy debate is not about whether to replace Sydney Airport but how best to provide further airport capacity for Sydney’.<sup>172</sup> The Commission’s views regarding incentives for new investment are discussed earlier in this section.

SACL also argues that incumbent airlines are the primary beneficiaries of congestion at the current level of aeronautical charges.

Final customers see none of the apparent benefit of artificially low aeronautical charges when there is excess demand for popular slots, and rights are conferred on the basis of existing use. In fact, it is not in the interests of the incumbent airlines to provide new capacity at a second airport, or to price the existing capacity at Sydney Airport at its opportunity cost. To do so would make it increasingly difficult for incumbent airlines to hold onto existing slots, thereby providing greater opportunities for competitors to secure landing slots and increase competition in airline services.<sup>173</sup>

By contrast, BARA argues that SACL’s land valuation approach is not a necessary condition for efficient decision-making with regard to either the use of land for aeronautical/non-aeronautical services, the allocation of scarce capacity or the expansion of capacity elsewhere in the Sydney basin. The advice provided to the Commission by NECG also comments explicitly on this issue.

## 7.5.3 Price levels and congestion

One of the Commission’s objectives in its assessment of SACL’s proposal is that airport users receive appropriate signals regarding the efficient use of airport services. At a congested airport like Sydney Airport signals to manage congestion are particularly important.

At the moment Sydney Airport’s capacity is constrained by availability of land and infrastructure, by the curfew and by the cap of 80 movements per hour. The Commission understands that four peak hours are already fully occupied during week days. As traffic volumes increase it is likely that less and less capacity will be available to new entrants and for expansion by the incumbents.

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<sup>171</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.43.

<sup>172</sup> Australia Pacific Airports Corporation, op. cit., p.8.

<sup>173</sup> Sydney Airports Corporation Ltd, (2) op. cit., pp.43-44.

It may be possible to address congestion through adjustments to price levels. In practice increases in overall price levels without adjustments to the existing price structure may have little impact.

Even on the assumption that all increases in aeronautical charges are passed on to end-users, traveller demand is unlikely to be significantly affected by the increased charges. SACL itself has claimed that the price increase will have only a small impact on air travellers, arguing that ‘...[t]he loss of any excess demand that has been stimulated by low aeronautical charges is not expected to materially impact on forecasts’.<sup>174</sup>

Similarly, Impulse Airlines comments on the effect of the proposed aeronautical charges in its submission to the Commission:

Impulse also shares the view that the minimal rise of airport charges on other larger aircraft types should not impact on overall domestic air travel demand or prices.<sup>175</sup>

Advice from NECG also makes this point:

What anecdotal evidence is available, looking at the centrality of Sydney to international air traffic in and out of Australia, as well as Sydney’s importance as a domestic hub, suggests that demand is quite inelastic.<sup>176</sup>

In relation to the prices proposed by SACL, neither SACL nor any submissions to the Commission have presented any evidence to suggest that the new charges will lead to materially different scheduling decisions by airlines.<sup>177</sup>

A more effective way of addressing congestion is to restructure prices. There are two ways of doing this. One is to introduce peak period charges. This would encourage airlines to move to off-peak times. The second is to reduce price differentials between large and small aircraft to encourage airlines to use fewer and larger aircraft.

SACL’s proposals do not address either of these possibilities. In fact in some circumstances the prices proposed will send signals which provide incentives for airlines to use smaller aircraft. The price structure proposed generally results in similar price increases across different types of aircraft in percentage terms except for regional aircraft. Charges for all domestic aircraft increase by the same percentage (approximately 175 per cent), while charges for regional airlines, in many instances, do not increase at all. Furthermore, since smaller aircraft are generally lighter per passenger (for example, MTOW per available seat for a 737 is around one half that of a 747) the price increases proposed will increase the per passenger price disadvantage faced by operators of larger aircraft.

Only with respect to international aircraft will airlines face the right incentives to adjust their schedules, primarily due to the fact that the terminal charge is moving from a weight-basis to a per passenger basis. Since there is a general inverse relationship between aircraft capacity

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<sup>174</sup> Sydney Airports Corporation Ltd, (1) op. cit, p.xxiii.

<sup>175</sup> Impulse Airlines, *Aeronautical Pricing Proposal by Sydney Airports Corporation Ltd*, November 2000.

<sup>176</sup> Network Economics Consulting Group, (2) op. cit., p.24.

<sup>177</sup> BARA argues on p.114 of its submission that ‘[t]o the extent its pricing approach will have any effect on the decisions made by domestic and international airlines as suggested by SACL, SACL’s pricing approach will likely result in the **less** efficient use of capacity at Sydney Airport’. Board of Airline Representatives of Australia, (1) op. cit.

and the passenger/MTOW ratio, this means that the increase in international terminal charges is effectively greater for smaller aircraft.

The net effect of the changes proposed by SACL is likely to be a negligible to negative impact on the demand side. Accordingly, there is little likelihood of the new charging structure providing any relief from current runway congestion issues. The Commission considers that the most appropriate mechanism for SACL to address congestion issues is through differential peak/off-peak pricing and incentives for use of larger aircraft.

#### **7.5.4 Interaction between price levels and price structure**

SACL's proposal recognises the importance of price structures in managing congestion and has flagged that SACL will consider changes in future (see chapter 12 for further details).

One of the arguments made by SACL is that price restructuring by itself may not be enough to address congestion issues. The Commission accepts that there is an interaction between price levels and price structure. If the price level is too low, then a restructuring of prices may not send strong enough signals to provide airport users an incentive to re-schedule flights or use larger aircraft.

The question of whether the revenue levels proposed by SACL would be sufficient when combined with price restructuring is essentially an empirical question. The Commission sought advice from NECG on this matter. NECG disagrees with SACL's claim that the choice of land valuation method limits the ability to ensure efficient allocation of existing capacity. NECG argues that the congestion problem faced by Sydney Airport is primarily a peak-load pricing problem. In this regard, to show that the allowable revenue under alternative land valuation approaches is too low to manage congestion, SACL would need to demonstrate that even when off-peak prices were zero, peak prices could not be high enough to manage demand without breaching the allowable revenue. Even if this were established, an efficient peak-load pricing scheme could be implemented, under which some formula for the distribution of the congestion rent were established.

#### **7.5.5 Conclusion**

This section has assessed SACL's proposal against the objective that airport users receive appropriate signals regarding the efficient use of airport services. It concluded that adjustments to price levels without adjustments to the existing price structure are unlikely to satisfy the objective, and that a more effective way of addressing congestion is to restructure prices to encourage airlines to reschedule flights to off-peak periods or use larger aircraft.

While SACL has not restructured prices to address congestion in this proposal, it has flagged its intention to do so in future. In doing so SACL argues that its ability to send strong enough signals for significant demand-side responses requires increased prices. More specifically SACL seems to argue that the higher prices flowing from the land revaluation proposed are necessary to allow the airport operator to effectively manage demand.

While, the Commission accepts that price structure needs to be considered in conjunction with price levels, the implementation of charges accepted in this draft decision will significantly increase SACL's ability to manage demand.. In this case the Commission has considered input from SACL, interested parties and consultants on the issue. Its conclusion is

that there is significant scope for SACL to address current congestion issues through the implementation of a peak-load pricing scheme. The revenue levels implicit in this draft decision should be sufficient to address any congestion issues that arise over the next five to ten years when combined with appropriate price restructuring.

## **7.6 Conclusions and draft decision**

In light of the uncertainty surrounding the estimation of opportunity cost, it is the Commission's view that an indexed historic cost basis provides SACL with a return sufficient to provide them with an incentive to continue operating an airport at the Mascot site. While an historic cost approach does not necessarily send all the appropriate signals regarding the optimal location for an airport, this decision is likely to involve an evaluation of the full costs and benefits of alternative locations, not merely the private costs to SACL. In this regard, an indexed historic cost valuation sends signals at least as good as SACL's proposal. Furthermore, an historic cost approach obviates the need for the regulator to attempt such an exercise.

These arguments also apply to the price signals sent to users of Sydney Airport. It is the Commission's view that congestion at Sydney Airport can be managed through future changes to price structure, without needing to raise the level of revenues beyond those endorsed in this draft decision.

An indexed historic cost valuation provides SACL with appropriate incentives to expand capacity, as land acquisitions are incorporated into the asset based at their purchase price.

There are further advantages in using an historic cost approach to land valuation, one being that it is that it is readily quantifiable. As such, it is a significantly less subjective valuation approach than the alternatives put before the Commission.

In light of these considerations, it is the Commission's view that indexed historic cost is a superior approach to the valuation of land than the methodology proposed by SACL.

The Commission's draft decision is to use indexed historic purchase cost as an estimate of the value of land at Sydney Airport. The index to be used is the consumer price index. Landfill is also incorporated into the Commission's land valuation and excluded from other assets. On this basis, the Commission estimates the value of the land as at 1 July 2000 to be \$488m, compared to SACL's estimated value of \$705m.<sup>178</sup>

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<sup>178</sup> Land values include landfill.

## ■ Chapter 8: Allocation of capital costs (assets)

### 8.1 Introduction

As explained in earlier chapters, the dual till approach as proposed by SACL requires the identification and quantification of the aeronautical cost base. Given the inter-dependent nature of the provision of services at Sydney Airport, this process implies the separation of the aeronautical from the non-aeronautical sides of the business. Effectively, this means that all assets involved in the running of the airport must be classified and allocated into either of three categories:

- a) aeronautical<sup>179</sup>
- b) non-aeronautical
- c) common and/or joint<sup>180</sup>

Airports typically operate numerous assets that can be perceived as serving both aeronautical and non-aeronautical functions. Hence the decision to *identify* costs as common is an important one. It also necessitates another step in the process – to *allocate* these common costs amongst aero and non-aero sides.

This section deals with issues related to this process as adopted by SACL.

### 8.2 SACL's approach

#### 8.2.1 Existing assets

For the revised proposal, SACL applied its ABC model to its existing cost base. This involved delineating its entire cost base into activity codes, and ultimately (directly or indirectly) allocating some proportion of each cost item into an ABC asset code.

SACL explains:

...the assets have ... been assigned ABC codes based on their specific uses and contribution to various activities and services.<sup>181</sup>

The ABC allocation process achieves allocation of the existing cost base amongst both:

- aeronautical or non-aeronautical and
- different asset classes, for the purposes of pricing.

Most importantly, costs were allocated into different aeronautical asset classes, which correspond to the proposed charging basis.

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<sup>179</sup> Or more strictly speaking, those costs that will form the cost base for the pricing proposal; not necessarily synonymous with “aeronautical.”

<sup>180</sup> For the purposes of the discussion that follows, no distinction is made between common and joint costs.

<sup>181</sup> Sydney Airports Corporation Ltd, (2) op. cit., p.78.



Following are some notable examples of SACL's allocations, which serve to illustrate the operation of the allocation methodology:

**Table 8(a): Examples of cost allocation**

Account description	ABC activity code	ABC activity description	Cost (\$)	ABC asset code allocation	Notes
RTA	A010	Runways	244,875,310	Direct: S1005 Aircraft landings	100% aero – recovered via landing charge.
Lighting & visual aids	A010	Runways	284,507	Direct: S1005 Aircraft landings	100% aero – recovered via landing charge.
RTA	A020DA	Domestic aprons	22,745,689	Direct: S015 Domestic Infrastructure	100% non-aero – not an aero asset class.
Roads & Carparks	A031	Car parks charged	8,639,673	Direct: S105 Car parks charged	100% non-aero – not an aero asset class.
Passenger Terminal buildings	A001	Sydney International Terminal	178,790,251	59.40%: S020 int terminal (aero) 40.60% non-aero assets	Split based on proportion of square metreage in terminal devoted to aero/non-aero.

### 8.2.2 New assets

SACL embarked on a substantial new investment program in 1998, primarily involving the SA2000 project. The revised proposal updated the asset register contained in the original draft, which had included only those assets as at 30 June 1998. The revised draft incorporates that part of the new investment program completed from 1 July 1998 to 30 June 2000. SACL explains that:

This includes the \$420m fixed lump sum component of the SA 2000 project. As a result, actual costs are known and the approximately 2000 individual assets have been capitalised into SACL's asset register.<sup>182</sup>

Accordingly, as with the assets existing prior to 30 June 1998, these assets have been allocated using the ABC system, as discussed.

<sup>182</sup> Id.

Remaining as 'new' is \$101.6m (\$90.4m in Dec model) for the estimated cost of new assets expected to be capitalised between 1 July 2000 and 1 November 2000. These projects fall under the categories of either "parallel capital works" (PCW) or "other capital projects".

The table below illustrates the bulk of these projects, and how they were allocated amongst aeronautical and non-aeronautical, and to which asset class/charge. The most significant aero/non-aero allocation of the new capex was a 59.40/40.60 split of costs relating to the international terminal, which reflects SACL's estimation of the relative areas of floor space devoted to providing these respective services.

**Table 8(b): Allocation between aeronautical and non-aeronautical services**

<b>Project</b>	<b>Allocation (aero/non-aero)</b>	<b>ABC asset code/charge</b>
<i>PCW:</i>		
(Most)	59.40/40.60	Int terminal
SIT ground access piazza, canopies	60/40	Int terminal
JUHI	100/0	Apron parking
Baggage assets	100/0	Int terminal
<i>Other:</i>		
Runway/taxiway re- sheet	100/0	Aircraft landing
Widening of northern perimeter road	100/0	Aircraft landing
Minor works other	90/10	Aircraft landing

Of the \$101.6m (\$90.38m) of new capex to be completed in the 4 months to 1 November 2000, \$27.1m (\$21.1m) was allocated to aeronautical. The vast proportion of "other" projects was considered non-aeronautical, including the \$34.4m cost of check-bag screening, passenger screening (\$2.6m) and \$8.4m on commercial projects.

### **8.3 Views of interested parties**

Given BARA's opposition to a dual till approach, its overall view was that it would prefer not to be commenting at all on cost allocation:

It should be noted that if a single-till approach was adopted, the matter of allocation would cease to be relevant.<sup>183</sup>

<sup>183</sup> Board of Airline Representatives of Australia, (1) op. cit, p 195.

BARA advances that cost allocation is difficult and can be an arbitrary exercise.

However, given that SACL has adopted a dual till approach, BARA made several comments regarding SACL's proposed cost allocation methodology.

BARA set out principles it considered fundamental in any cost allocation methodology. These included the need for transparency, consistency with the definition of aeronautical, internal consistency, and that common costs should not be over-recovered.

BARA states that the information pertaining to SACL's ABC allocation system

... was provided at too late a stage for BARA to fully examine these issues and therefore BARA's analysis of asset values has been performed on the basis of allocations presented in the draft proposal.<sup>184</sup>

BARA notes that it would be making a further submission on cost allocation following a more thorough assessment of SACL's application of the ABC system.

However, based on allocations in the original draft,

BARA disagrees with SACL's identification and apportionment of common costs, on the basis that it underestimates the asset's use in producing non-aeronautical revenues. This outcome is typical under the dual till approach to pricing as noted by NECG in their Report *Dual Till at Sydney Airport*:

*The dual till approach to regulating airport prices is likely to provide airports with the following incentives:...*

- *to set the prices for regulated aeronautical and non-aeronautical services to the maximum level possible under the regulatory constraints by shifting all costs that are common to airport services to the regulated services;*<sup>185</sup>

### 8.3.1 Existing assets

BARA has criticised several particular SACL cost allocations in its submission, including roads, fixed plant, and amenities. However, the Commission notes that SACL has altered its methodology, in particular regarding "ground access infrastructure" for its revised proposal. Since BARA has not had sufficient opportunity to review this revised methodology, BARA's assessment of SACL's ABC system will be incorporated into the final decision.

### 8.3.2 New assets

For many of the new projects, BARA remarks that SACL has provided insufficient information of the method of cost allocation, and so limited assessment of these projects was undertaken by BARA.

BARA did, however, highlight five projects in which it held contrasting views on the allocation of costs as proposed by SACL.

*2<sup>nd</sup> zone sub-station and HV Option no. 7 upgrade*

SACL has allocated the 2<sup>nd</sup> zone sub-station and the HV Option no. 7 upgrade as 60% aeronautical and 40% non-aeronautical. BARA disagrees with this allocation on the basis that

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<sup>184</sup> Ibid, p 188.

<sup>185</sup> Ibid, p 189.

the network electricity charges levied by SACL include a return on the assets, including substations, used to provide these services. Therefore these assets should be allocated 100% to non-aeronautical, and not be identified as a common cost.

*Skylight (Pop Up) to Terminal Eastern Extension*

SACL allocated the Skylight as 60% aeronautical and 40% non-aeronautical. BARA disagrees with this allocation on the basis that the Skylight was installed for the benefit of retail users. Therefore this asset should be allocated 100% to non-aeronautical, and not be identified as a common cost.

*FIDS Replacement (non-2000 compliant)*

SACL has allocated the FIDs replacement in the international terminal as 100% aeronautical. BARA disagrees with this allocation on the basis that all airport users – including retail tenants and meeters and greeters – use these facilities not only the travelling public. Indeed the size and configuration of the FID's system would have been determined after considering the total area of the terminal and the increase in retail space in the international terminal design has necessitated an increase in the number of FID's monitors required. Therefore the FID's in the international terminal should be identified as a common cost.

*Minor Works < \$250,000 Pax Services'*, which has been allocated 100% to aeronautical. SACL staff represented that this project involved works at the domestic and international precinct.

*'SA2000 - Construction Car Park'* which has been allocated 100% to aeronautical. This construction car-park was used by contactors working on the SA2000 Project and as such is a common cost and should be allocated in part to aeronautical and in part to non-aeronautical.<sup>186</sup>

Noting the incentives for the over-allocation of costs to the aeronautical side of the business, BARA also raised a form of rationality check on the reasonableness of the cost allocation methodology. BARA contended that management submissions to the SACL Board are a useful way of checking the validity of allocations.

## **8.4 Commission assessment**

As has been noted by SACL, interested parties and the Commission's consultants, a regulated airport (or any firm) faces clear incentives to over-estimate the proportion of its cost base serving 'regulated' activities. The incentive arises as regulated prices will be higher the more expansive the regulated cost base. Its ability to do so derives from the nature of many of the assets typically used to provide regulated airport services. Were it the case that all services at an airport could be clearly traced to their own exclusive assets, then the difficulties associated with cost allocation would disappear. However, many of the services at an airport share the use of the same assets. To reflect this relationship, it is considered fair and reasonable for these common costs to be allocated amongst the different services, importantly at the regulated/non-regulated level. The difficulty and arbitrariness associated with cost allocation arise however, as there is often no obvious fair method of cost allocation.

There is no simple economic principle which governs allocation of costs. As a starting point though, subsidy free pricing based on the following principles is consistent with these economic principles:

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<sup>186</sup> Ibid, p 193-195.

- revenues generated by any subset of services provided should not exceed those based on cost for sole provision of that set of services (that is, stand alone costs); and
- total revenues for any subset of services should not be less than the incremental cost of providing those services.<sup>187</sup>

In practice the gap between incremental and stand alone costs can be substantial.

It is the Commission's view that costs that are not incurred exclusively for aeronautical purposes, and are shared in providing aeronautical and non-aeronautical services, ought to be regarded as common costs.

The Commission stated in its Adelaide Airport MUIT decision:

Once a relationship has been established, the question of how much of the common cost ought to be allocated between the aeronautical and non-aeronautical activities arises. Of the two most common methods of allocation (physical measures and net realisable values) it is physical measures that appear most appropriate for airport assets. Allocations based on net realisable values will generally be impractical at airports because individual facilities are not separately traded. Airport operators should attempt to identify a physical "driver" that may be used to allocate costs. For example, the square metre floor space occupied by non-aeronautical activities relative to aeronautical activities within a terminal may represent an appropriate driver. It is recognised that an allocation of common costs made on this basis may bear no relationship to the revenue-producing potential of the individual aeronautical and non-aeronautical activities.

In the absence of any reasonable cost driver, the allocation of common costs is unavoidably arbitrary. In a paper prepared for the Commission's consideration of an issue in the telecommunications industry, economic consultants NERA<sup>188</sup> noted that one option is to adopt a simple "rule" of splitting the common costs equally between the activities that drew on them. In an airports context, this means that common costs may be allocated as fifty per cent aeronautical and fifty per cent non-aeronautical.<sup>189</sup>

The Commission's draft decision is that SACL's ABC model represents a reasonable approach to the allocation of the airport cost base. The Commission will take into account BARA's work on the ABC system when making the final decision.

<sup>187</sup> Whether short run or long run incremental costs are used here depends on the nature of the service provided, duration of the contract and so on.

<sup>188</sup> National Economic Research Associates, *Estimating the Long Run Incremental Cost of PSTN Access: Final Report for Commission* January 1999.

<sup>189</sup> Australian Competition and Consumer Commission, (5) op. cit., p 22-23.

## ■ Chapter 9: Operating Expenditure

### 9.1 Introduction

Aeronautical charges at privatised airports are subject to a CPI – X price cap that offers an incentive for the airports to be more efficient and reduce costs. Sydney Airport is a government owned monopoly, not subject to a CPI – X price cap, but rather, is subject to prices surveillance under the PS Act. SACL has adopted a cost-based approach to pricing as reflected in the building block methodology.<sup>190</sup> Thus, it is arguable, Sydney Airport is not subject to the same incentives as the privatised airports to minimise costs and operate efficiently.

This chapter considers the methodology used by SACL to calculate its anticipated cost savings, the allocation of costs between aeronautical and non-aeronautical services and the efficiency of aeronautical operating costs at Sydney Airport.

The Commission's draft decision is concerned with ensuring that the setting of aeronautical charges is predicated on efficient operating costs.

### 9.2 SACL's Proposal

In its draft pricing proposal (December 1999) SACL forecast its aeronautical operating expenditure as approximately \$71m for the 2000-01 financial period. SACL stated operating expenditure is influenced by the following factors:

- Growth in the area of the International Terminal;
- Growth in aircraft movements;
- Growth in the number of passengers;
- Growth in the landed tonnage; and
- Inflation (increases in the CPI).

SACL categorised its operating expenditure into four major areas:

- General administration;
- Utilities and services;
- Property maintenance; and
- Labour costs.

Cost estimates were based on actual costs during 1998-1999, indexed for likely movements over time and allocated between aeronautical and non-aeronautical services using an ABC model.

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<sup>190</sup> The building block methodology is outlined in the Commission's DRP.

In its revised proposal SACL adjusted the 1998-99 operating cost base downwards to reflect the non-recurring nature of some expenses including those related to Y2K preparation and bad debts. The revised proposal included a provision for special project expenses, including an allowance for master planning and aeronautical pricing and other regulatory management costs.

SACL stated,

Contrary to airline customer claims, SACL's assumptions include significant improvements in efficiency. The Revised Draft Proposal assumes falling staff numbers in 2000-01. As the released financial model covers only one year, the trend of future expected efficiency gains is not fully evident. These expected gains are partly responsible for SACL targeting a revenue level significantly below allowable revenue.<sup>191</sup>

SACL engaged Leigh Fisher Associates (LFA); a US based consultancy firm, to provide an assessment of aeronautical operating costs at Sydney Airport in comparison with Melbourne, Brisbane and Perth airports.

SACL states that,

[t]his study finds that SACL's costs are reasonable and appropriate to its operating environment.<sup>192</sup>

SACL also states that,

LFA also found that Sydney Airport's unique operating characteristics arise from its status as Australia's national gateway, airline demand, its facilities and operational constraints.<sup>193</sup>

The LFA report has not been made publicly available. In the revised proposal SACL estimated aeronautical operating expenses to be approximately \$64.2 million for the 2000/01 period.

SACL has recently revised aeronautical operating costs to approximately \$56.4million for the 2000/01 period.<sup>194</sup>

### **9.3 Views of Interested Parties**

In response to SACL's proposal BARA states,

In BARA's view SACL has:

- Used a methodology to estimate operating expenditure that is inconsistent with its own building block approach;
- Failed to establish that its proposed operating costs are the costs of efficiently operating the airport;
- Failed to provide relevant information in order for BARA to fully assess the reasonableness of its proposed operating expenditure; and
- Failed to provide a transparent methodology for allocating operating costs between aeronautical and non-aeronautical services.

Furthermore, the available evidence strongly suggests that:

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<sup>191</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 111.

<sup>192</sup> Ibid, p. 8.

<sup>193</sup> Ibid, p. 114.

<sup>194</sup> See discussion on cost allocation in this chapter.

- The operating expenses proposed by SACL are grossly excessive when compared with comparable Australian airports; and
- SACL has over allocated its operating expenses to aeronautical services.<sup>195</sup>

In particular, BARA is of the view that the upper limit to efficient operating costs at Sydney Airport in 2000/01 is \$40.6 million, as opposed to \$64.2 million stated in the revised proposal.<sup>196</sup>

British Airways comments that,

...SACL has also not demonstrated that its operating costs in FY 1998/99 are those of an efficiently operated airport. Even though its operating costs for FY 2000/01 are estimates of its FY 1999/00 operating costs, it did provide the basis why there should be increase[s] despite the expectation of productivity improvements and increase in passenger and aircraft movements, all of which should reduce the cost over time.<sup>197</sup>

The International Air Transport Association (IATA) made similar comments to British Airways.<sup>198</sup>

Melbourne Airport comments that,

Whilst we do not necessarily concur with [the Leigh Fisher Associates report's] methodology or conclusions in every instance, we would support the view that what it shows is that overall there is little difference in the cost structures of Australia's largest four airports. What differences do exist can in many instances be understood by the differences in the markets served, the physical configuration of assets, external constraints and management decisions (particularly in relation to outsourcing).<sup>199</sup>

Brisbane Airport, Canberra Airport, Perth Airport, Overnight Airfreight Operators Association Inc and other interested parties made no comments regarding operating and maintenance costs in their submissions to the Commission in response to SACL's revised proposal.

## 9.4 Discussion

As stated in the introduction to this chapter, Sydney Airport is not necessarily subject to the same incentives to minimise costs as the privatised airports. In particular, where the approach to aeronautical pricing is cost-based, as in SACL's proposal, the Commission's approach is to allow prices based on reasonable estimates of efficient operating costs.

SACL submitted its operating costs were reasonable and appropriate given its operating environment.

The key points of BARA's submission were that SACL's methodology for estimating operating costs is inconsistent, that the methodology for allocating operating costs is not transparent and that operating expenses are "grossly excessive" and have not been established

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<sup>195</sup> Board of Airline Representatives of Australia, (1) op. cit, p. 161.

<sup>196</sup> Ibid, p. 185.

<sup>197</sup> British Airways, op. cit..

<sup>198</sup> International Air Transport Association, (1) op. cit., p. 7.

<sup>199</sup> Australia Pacific Airports Corporation, op. cit. submission, p. 10.



as efficient.<sup>200</sup> BARA argues that SACL is attempting to pass on operating costs irrespective of their efficiency.<sup>201</sup>

#### **9.4.1 Methodology for estimating operating costs**

SACL's methodology for estimating operating costs was to base its estimates on actual operating costs during the 1998-1999 financial year, index these costs for likely movements over time and allocate them between aeronautical and non-aeronautical services using an ABC model.

BARA states that the methodology used by SACL to estimate its operating costs is inconsistent with its building block approach to aeronautical pricing.

SACL's building block methodology, if implemented correctly, should estimate the minimum costs of replicating the services supplied by SACL at an optimally designed airport using assets embodying modern technology....

Although SACL's building block methodology purports to estimate asset values on the basis of modern technology, its operating costs are based on actual costs.<sup>202</sup>

BARA argues that as SACL's actual operating costs are based on the use of old technology they are likely to be significantly greater than those if modern assets were used.<sup>203</sup> That is, that SACL's operating costs are not as low and efficient as possible.

In this draft decision the Commission adopted a brown-fields approach to asset valuation (see Chapter 5 for this discussion). The Commission took the approach of adopting valuations based on the existing site and assets and considers that for consistency reasons the same approach to operating costs is not unreasonable. Optimising asset valuations may give rise to some operating costs savings. However, the Commission considers that given the level of optimisation in regards to assets, as discussed by Opus, the Commission would expect any operating cost savings to be relatively minor. Thus, the approach used by SACL to estimate its future operating costs does not appear unreasonable.

Efficiency issues are discussed later in this chapter.

#### **9.4.2 Operating cost allocation**

Secondly, BARA raises the issue that the methodology used to allocate costs between aeronautical and non-aeronautical services was not transparent.

In the revised proposal SACL states,

SACL used the ABC model to determine the operating costs attributable to aeronautical and non-aeronautical services. The ABC model does not provide a breakdown of allocations automatically. To determine the aero/non-aero split of a lower level category or individual chart of account required the exclusion of all other data from the model. This process takes approximately 1 hour per line item.

In preparing the financial model, SACL ran the ABC model for the total costs and each cost category. From these splits, individual chart of account splits were estimated.

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<sup>200</sup> Board of Airline Representatives of Australia, (1) op. cit, p. 161.

<sup>201</sup> Ibid, p. 160.

<sup>202</sup> Ibid, p. 161.

<sup>203</sup> Id.

At the request of airline customers during consultation, SACL undertook the detailed analysis of aero/non-aero splits on a chart of account line basis using the ABC model. Naturally, there were some variances between the estimates and the precise splits. However, the category totals and overall total remained unchanged.<sup>204</sup>

In response, BARA states,

For SACL's allocation of operating expenses to aeronautical and non-aeronautical services to be reasonable:

The rules of the ABC model for allocating operating costs must be appropriate; and

The assignment of cost items to particular rules must be reasonable.<sup>205</sup>

The issue is that if costs are not allocated reasonably between aeronautical and non-aeronautical services, costs may be over-allocated to aeronautical services and result in higher costs than what is necessary for efficient operation of aeronautical services.

The regulatory regime applying to Sydney Airport effectively requires SACL to separate aeronautical and non-aeronautical functions in an accounting sense. Because the regulatory regime applies only to charges for aeronautical services the relevant costs will comprise those which relate to the provision of aeronautical services. The Commission considered the issue of allocation of costs between aeronautical and non-aeronautical services in a new investment decision regarding the MUIT at Adelaide Airport.<sup>206</sup>

Guidance as to the basis of this allocation may be taken from the list of facilities at Sydney Airport declared by the Minister.<sup>207</sup> However, it is only the aeronautical services provided by these facilities that can be taken into account when considering aeronautical costs and charges. Costs that are not incurred exclusively for aeronautical purposes and are shared in providing aeronautical and non-aeronautical services, ought to be considered as common costs. (Common costs are discussed in chapter 4).

The Adelaide Airport MUIT decision discussed the alternatives of the two most common methods of allocation (physical measures and net realisable values) and determined that the physical measures approach appeared the most appropriate for airport assets. It stated that airport operators should attempt to identify a physical "driver" as the basis upon which costs can be allocated.<sup>208</sup> In the absence of clear aeronautical or non-aeronautical cost drivers at a facility, the allocation of common costs is unavoidably arbitrary.

As such, the Commission's objective is for costs to be allocated on a fair and reasonable basis. In this instance SACL has used an activity based ABC model to determine the split between aeronautical and non-aeronautical costs. The Commission has reviewed the rules for SACL's ABC model for allocating operating costs and these do not appear unreasonable. The Commission notes that BARA was not able to fully examine the ABC model prior to making its submission and reserved the right to make a further submission on the allocation of costs under the ABC model.

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<sup>204</sup> Sydney Airports Corporation Ltd, (2) op. cit, p. 123.

<sup>205</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 180.

<sup>206</sup> Australian Competition and Consumer Commission, (4) op. cit.

<sup>207</sup> Declaration No. 89, June 2000.

<sup>208</sup> Australian Competition and Consumer Commission, (4) op. cit., p. 22.

The Commission also notes that SACL since submitting the revised proposal in September 2000 has reallocated costs between aeronautical and non-aeronautical services. This was as a result of refinements to cost allocations identified in SACL's review of major cost items undertaken while preparing their 1999-2000 Regulatory Report for the Commission. The following expenses were excluded from the aeronautical operating cost base:

- ground access operating costs,
- one-off costs associated with the Olympics, and
- privatisation costs.

As such, this decreased the amount of aeronautical operating costs from approximately \$64.2 million to approximately \$56.4 million.

### **9.4.3 Efficient operating costs**

Thirdly, BARA submits that SACL's operating expenses were 'grossly excessive' and had not been established as efficient.

As stated above, SACL engaged Leigh Fisher Associates (LFA) to provide an assessment of aeronautical operating costs at Sydney Airport in comparison with Melbourne, Brisbane and Perth airports.

In the revised proposal SACL states that,

LFA found that operationally, Sydney Airport falls into a uniquely challenging environment, characterised by:

- Substantial limitations on the full use of airfield capacity;
- significant activity peaking;
- major site and property constraints which impose unique management and operational challenges;
- regional labour costs, on average 8.0% high than in other areas;
- high percentage of international traffic; and
- a higher average age of terminal buildings.<sup>209</sup>

In response to SACL's revised proposal, BARA made the following key arguments:

A more meaningful approach is to compare Sydney's operating costs and productivity with comparable airports in Australia...

Differences in regional labour costs explain little of SACL's higher aeronautical operating costs...

SACL's labour productivity is significantly below that of other major airports in Australia...

Non-labour costs are significantly higher at Sydney Airport than at other major Australian airports...

Differences in the number of international carriers and differences in the proportion of international passengers do not explain SACL's higher aeronautical operating costs...<sup>210</sup>

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<sup>209</sup> Sydney Airports Corporation Ltd, (2) op. cit., pp. 113-114

<sup>210</sup> Board of Airline Representatives of Australia, (1) op. cit., pp. 163-171.

SACL presents a number of arguments as to why it has higher operating costs than the other privatised airports. SACL submitted that its labour productivity is in line with other major Australian airports once basic benchmarking adjustments are made such as for regional labour costs and the proportion of international services.<sup>211</sup> The LFA report lends support to SACL's case.

BARA's analysis, however, indicates that these reasons do not fully justify the difference between SACL's operating costs and the operating costs of privatised airports. Nor do these reasons seem to justify differences in productivity as highlighted by BARA.<sup>212</sup> Indeed the LFA report commissioned by SACL may have had greater persuasive value if it not only identified those elements that contributed to higher costs, but, had also explored what options may be available to Sydney Airport to decrease its aeronautical operating costs.

SACL submits that any forward looking prices oversight (the current pricing regime at Sydney Airport) has similar efficiency incentives as an explicit CPI – X prices oversight arrangement (the current pricing regime at privatised airports).

The CPI – X price cap provides an incentive for airport operators to reduce production costs and become more efficient. The 'X' reflects expected productivity improvements and takes into account such factors as increased traffic volumes and increases in utilisation of airport infrastructure. Without a CPI – X price cap Sydney Airport is not subject to the same incentives to achieve productivity gains as the privatised airports. Sydney Airport has not faced such incentives in the past and the cost-based approach to pricing, using costs as a basis for aeronautical charges, provides strong incentives for Sydney Airport not to minimise costs.

SACL states it is accountable for its financial performance to its shareholder, represented by the Minister for Finance and Administration.<sup>213</sup> The Commission does not consider this to be a persuasive argument. Furthermore, as Sydney Airport is subject to a cost-based regime and is not privately owned, it may not face the same profit maximising incentives as the privatised airports, nor is it subject to the same market discipline as other privatised airports.

The Commission considered SACL's position in relation to the level of aeronautical operating costs and considers that the LFA report and SACL's arguments offer some justification for Sydney Airport's operating cost levels. Overall, however, the Commission does not have sufficient information to comment on what would be efficient levels of operating costs, nor would it be appropriate for the Commission to comment on an appropriate amount of expenditure per line item.

It is unfortunate that the LFA report, while offering justification for SACL's current level of operating costs, was not a forward looking exercise on the potential for future cost savings and efficiency gains could be made by Sydney Airport. The Commission also expresses its disappointment at the apparent information asymmetry and breakdown in the negotiation process between SACL and airport users.

Based on the experience of private airport operators it is reasonable to expect some level of efficiency improvements. The Commission has calculated the average cost savings achieved

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<sup>211</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 125.

<sup>212</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 169.

<sup>213</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 119.

by Melbourne, Perth and Brisbane Airports and examined SACL's operating costs in comparison.<sup>214</sup> If SACL is committed to improving operating efficiency the Commission would expect to see SACL achieving cost savings at a rate similar to these privatised airports. As such, the Commission would expect to see SACL achieving future cost savings at a rate of approximately 5 per cent per year in real terms.

## 9.5 Conclusion and draft decision

This chapter considered the issues regarding SACL's aeronautical operating expenditure. Concerns had been expressed particularly in reference to the methodology used to estimate future operating costs, the cost allocation process between aeronautical and non-aeronautical and the level of operating costs.

The Commission considers that the methodology used by SACL to estimate future costs and the basis for the cost allocation process were not unreasonable. The Commission is unable to comment specifically on the level of operating costs at Sydney Airport.

If SACL is committed to operating efficiency improvements there is no apparent reason to believe SACL cannot achieve the average cost savings achieved by other large privatised airports. As such, while the Commission does not object to the proposed aeronautical operating costs for the 2000/01 financial period of approximately \$56.4 million, the Commission considers this must be predicated on real cost savings of around 5 per cent per year for the next five years.

The effect of real cost savings is reflected in the "smoothed" prices, discussed in Chapter 11.

The Commission's draft decision is to not object to Sydney Airport's proposed aeronautical operating costs of \$56.4 million for the 2000-01 period. This draft decision is predicated on real cost savings of approximately 5 per cent per year for the next 5 years.

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<sup>214</sup> Comparison and calculations based on data contained within the following: FAC Annual Report, 96-97, 97-98; ACCC Regulatory Reports: Sydney Airport 1998-99, Brisbane Airport 1997-98, 1998-99, Melbourne Airport 1997-98, 1998-99, Perth Airport 1997-98, 1998-99 and the regulatory statements for the ACCC Regulatory Reports 1999-2000, yet to be published at the time of writing this draft decision.

## ■ Chapter 10: Weighted Average Cost of Capital (WACC)

### 10.1 Introduction

The Weighted Average Cost of Capital (WACC) is the element of the building block model that allows for a required rate of return to be earned by debt and equity capital providers (weighted according to their proportionate contribution). As well as being compensated for bearing the entity's capital costs, operating and maintenance expenditure, and taxes, capital providers are rewarded with a rate of return that reflects what these investors *could* be earning by committing their funds to an alternative project of similar risk; that is the *opportunity* cost of capital.

### 10.2 WACC formulation

In regulated applications, there are several alternative approaches to incorporating a WACC in a project's expected costs. Whilst theoretically, many methods are sound, the guiding principles should be that the chosen WACC will most accurately provide the true expected after-tax rate of return over the life of the project and is consistent with the corresponding cash flows.

#### 10.2.1 SACL's proposal

SACL proposes a post-tax WACC formulation for determining regulatory revenues.

The following vanilla form of post-tax WACC was used to calculate revenues<sup>215</sup>:

$$\text{WACC} = r_e (E/V) + r_d (D/V),$$

where  $r_e$  is post-tax nominal cost of equity capital (as calculated by the CAPM), and  $r_d$  is the (pre-tax) nominal cost of debt capital.

Prior to applying this formula to its building block model, SACL converted the above nominal WACC into a 'real' WACC using the Fisher equation.<sup>216</sup>

#### 10.2.2 Views of interested parties

BARA states that it "agrees with SACL that the WACC is the most appropriate model to estimate the required rate of return."<sup>217</sup> BARA also agrees in principle that the inclusion of taxation payments into cash flow projections rather than through the WACC is an appropriate approach. (BARA's criticisms of SACL's application of this approach are discussed in the financial modelling chapter, chapter 11.)

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<sup>215</sup> A vanilla form of WACC refers to the weightings (equity and debt proportions) being applied to a post-tax cost of equity and a pre-tax cost of debt. This is further discussed in section 10.2.4.

<sup>216</sup> The Fisher equation specifies the relationship between real interest rates ( $r$ ), nominal interest rates ( $i$ ) and expected inflation ( $p$ ) in the following formula:  $(1+r) = (1+i)/(1+p)$ .

<sup>217</sup> Board of Airline Representatives of Australia, (1) op. cit., p.143

Brisbane Airport advances a comprehensive criticism of the post-tax WACC approach to the regulation of utilities.

In summary, Brisbane Airport considers that the post-tax WACC approach:

- produces rate of return outcomes that reflect the theoretical minimum returns that would be earned under long run equilibrium conditions, rather than returns that businesses would expect to earn for generating and delivering sustained productivity gains to customers;
- produces rate of return outcomes that are inconsistent with the returns that should be set under an incentive regulation system;
- is unnecessarily complex and lacks transparency; and
- over the longer term will significantly weaken the positive incentives that are provided under an incentive regulation system and lead to higher prices.<sup>218</sup>

### 10.2.3 Discussion

SACL's proposed post-tax WACC formulation allows for taxation to be treated as a cost in the building block model's cash flows, rather than accounted for through a formulaic transformation of the post-tax WACC. SACL adopted this approach in recognition of the Commission's stated preference in its DRP and the prevailing view of the academic community.

BARA states that:

Officer shows that other formulations of the WACC are appropriate depending on how the cash flows are defined. Provided the definitions of the cash flows and the WACC are consistent there is an equivalence in the various definitions in terms of providing the same net present value.

The consensus of experts is that it would be preferable to recover actual taxes paid rather than notional taxes and that allowable rate-of-return targets should be set in after tax terms with explicit recovery of actual taxes. Provided the vanilla approach recovers actual taxes it should be equivalent to the traditional method where the tax flows are defined as  $X_0(1-T)$ . However it is noted that this equivalence strictly only applies on a perpetuity basis.

Nevertheless it may be simpler in terms of understanding, use and monitoring for regulatory purposes if the cash flow is defined in the traditional after tax method.<sup>219</sup>

### 10.2.4 Commission assessment

The advantages and disadvantages of a post-tax WACC as compared with a pre-tax WACC have been debated thoroughly in other forums. Briefly though, the advantages of a post-tax approach are generally perceived to be:

- The avoidance of the difficulty of properly accounting for expected future tax cash flows through a formulaic transformation, and
- the achievement of greater potential accuracy of the company's true tax position going forward, especially due to the modelling of the company's tax benefits associated with accelerated tax depreciation.

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<sup>218</sup> Brisbane Airport Corporation, op. cit., p. 11

<sup>219</sup> Board of Airline Representatives of Australia, (2) *Attachment: the cost of capital*, November 2000, p 4-5

Brisbane Airport's criticism of the post-tax approach is noted by the Commission. However it is considered that it may be more useful as a contribution to the development of the Commission's DRP. The post-tax WACC approach is the preferred approach arising out of that forum, and hence the Commission accepts the use of it by SACL.

The vanilla form of WACC refers to the weightings (debt and equity ratios) being applied to a *post-tax* cost of equity, and a *pre-tax* cost of debt. This rate is appropriate when applying a rate of return to post-tax building block cash flows. It reflects the fact that debt-holders are compensated before the payment of company tax, whereas equity holders receive compensation after company tax has been paid.

Although the Commission has stated a preference for a nominal WACC methodology in its DRP, SACL chose to adopt a real, rather than nominal formulation, and so adjusted the above formula using the Fisher equation. SACL proposes this approach on the basis that it preferred to compensate for inflation through the annual indexation of the asset base in its building block model.

The Commission's view is that SACL's post-tax WACC methodology is sound. As stated in the DRP and other decisions, the Commission considers the post-tax WACC formulation to be superior to its pre-tax counterpart. Essentially, the adoption of a post-tax WACC takes account of the "cost" of tax in the future cash flows, thus obviating the difficult task of transforming post-tax equity returns into their pre-tax equivalent.

Professor Davis concurs in stating that "the determination of the vanilla WACC is a relatively straightforward process, since all issues associated with the calculation of taxation and imputation are now shifted to the specification of the revenue model."<sup>220</sup>

The use of the vanilla approach is suitable for the cash flows being applied in SACL's model.

The conversion to a real WACC is reasonable and uncontroversial. It can be shown that it is equivalent to the nominal return if expected inflation equals actual inflation over the life of the project.

### **10.3 Risk-free rate**

The risk free rate is the rate that assumes no risk is being borne by those who provide funds. In modern economies, the government is typically the sole entity in the market for funds characterised by such a low level of risk. Therefore the usual practice in corporate finance and in regulatory practice is that some type of government bond rate is assumed to be the risk free rate, and forms the basis of the cost of capital, which is then adjusted for risk for both equity and debt capital.

#### **10.3.1 SACL proposal**

SACL used the 40-day average of the 5-year nominal government bond rate as the basis for the risk free rate. In its revised proposal, this was calculated to be 6.12 per cent.

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<sup>220</sup> K Davis, *Report on "Weighted average cost of capital for Sydney Airport"*, January 2000, p. 9.



### 10.3.2 Views of interested parties

The airlines did not raise major objections to SACL's approach to the risk free rate, although many parties, such as BARA, IATA and Brisbane Airport expressed an in-principle preference for the use of the 10-year bond rate.

### 10.3.3 Discussion

SACL adopts a bond maturity of 5 years on the basis of past Commission decisions.

SACL supports its 40-day averaging approach to the risk free rate by stating that it was "consistent with the cost of capital being a forward-looking concept, and is in line with the Commission's recent views with respect to smoothing daily rates".<sup>221</sup>

BARA argues that the:

...correct conceptual approach for determining the risk free rate is to take an average of one year bond rates over the time period of the investment. However BARA recognises the difficulties in implementing this approach. An acceptable proxy may be a 40-day average of a long term Government bond rate, as advocated by SACL.<sup>222</sup>

BARA prefers the use of the 10-year bond rate over the 5-year rate, however as:

... it corresponds to the period used for estimating market risk premiums (the CAPM assumes that the risk free rate and market risk premium will have the same horizon) and that it will most likely be more stable than a 5 year rate when there are substantial changes in monetary policy. However it is recognised that there is normally little difference between real rates for 10 year and 5 year Commonwealth bonds. Provided there continues to be little difference, BARA is of the view that SACL's approach is considered to be reasonable.<sup>223</sup>

On the issue of averaging, BARA notes that:

... it is reasonable to argue that a single observation may contain the effects of uninformed noise so that some averaging of recent rates is justified ... In the Adelaide, Brisbane and Perth Airport decisions the Commission used an 8 week average of the 5 year indexed government bond rate to determine the real risk free rate. This is considered reasonable.<sup>224</sup>

Brisbane Airport argues that the 10 year bond rate is more appropriate as the benchmark risk free rate. Consistency with the typical term of the market risk premium suggested the use of a 10 year rate. The normally upward-sloping yield curve implied that using 5 year rates would artificially underestimate the expected return on equity.

Davis stated that SACL's approach to the risk free rate seems "reasonable".<sup>225</sup>

### 10.3.4 Commission assessment

Two major issues associated with the risk free rate assumption have emerged in the regulatory context – bond maturity and averaging.

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<sup>221</sup> Sydney Airports Corporation Ltd, (1) op. cit., p. 6-5

<sup>222</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 144

<sup>223</sup> Board of Airline Representatives of Australia, (2) op. cit., p 6

<sup>224</sup> Id.

<sup>225</sup> Davis, op. cit., p. 9.

The issue of bond maturity concerns the selection of the appropriate term of Commonwealth bond as the basis for the risk free rate assumption. The debate on this issue generally revolves around whether the 5 year bond or 10 year bond is most suitable.

The Commission has stated a preference in several decisions for the use of the 5 year bond on the grounds that the 10 year bond's higher embedded inflation risk premium leads to the over-compensation of this risk were it to be adopted in frameworks designed to ameliorate this risk.<sup>226</sup> In the case of SACL, it is considered not unreasonable to assume that prices at Sydney Airport will be subject to further review after 5 years, in line with the price cap review period at Phase I and II airports, and other regulatory contexts. Hence, SACL's exposure to inflation risk is limited to that extent.

The argument that the term of the risk free rate should match the 10 year term typically used for the estimation of the market risk premium is not without merit. The Commission understands that this is the norm in corporate financial practice. However, in regulated applications, this principle is considered to be of lesser importance than ensuring that the term matches the duration of inflation risk.

Therefore the Commission supports the use of the government bond of 5 year maturity as the basis for the risk free rate assumption adopted in SACL's WACC and notes its consistency with the preference stated in the DRP.

As stated, the Commission has supported the use of short-term averaging of yields in order to smooth out the effects of financial markets volatility, and sees the 40-day moving average approach proposed by SACL as reasonable and in line with the DRP.

For the purposes of this draft decision, the risk free rate assumption is taken from the 40 day average yield of the 5 year government bond rate<sup>227</sup>, which as at 10 January 2001 was 5.53 per cent.

## **10.4 Inflation**

The expected inflation rate is used to convert nominal rates of return, such as the nominal WACC, into real rates of return. In a framework whereby prices adjust annually for CPI, this parameter is not critical, although it does affect starting-point prices.

### **10.4.1 SACL proposal**

SACL adopted a 2.6 per cent inflation assumption for the purpose of deflating the nominal WACC into a real WACC.

The figure was derived using the inflation implied by the difference between the 5 year nominal and real bond rates.

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<sup>226</sup> For example, see Commission decisions regarding the pass through of necessary new investment costs: Australian Competition and Consumer Commission, (7) op. cit.; Australian Competition and Consumer Commission, (10) op. cit.; Australian Competition and Consumer Commission, (8) op. cit.

<sup>227</sup> Since the exact 5 year rate is unknown the Commission calculated it using extrapolation procedures on the yields of July 2005 and June 2011 series government bonds.

## 10.4.2 Views of interested parties

BARA viewed SACL's approach as "reasonable".<sup>228</sup>

## 10.4.3 Discussion

SACL notes the Commission's usual preference for deriving the expected inflation rate, noting that:

...prevailing real yields on indexed Commonwealth government bonds [of 3.0 per cent] imply an inflationary expectation of [approximately 3 per cent].

However, market practitioners have recently observed that the current yields on indexed linked bonds are being distorted by the impending spike in inflation associated with the introduction of GST.<sup>229</sup>

Therefore, SACL argues, real yields are being temporarily held down, causing an artificially high nominal-real yield spread. Hence the use of the Commission's preferred method for deriving expected inflation will overstate the true level expected to prevail over the next 5 years and more.

SACL also regards its use of 2.6 per cent for the inflation parameter as consistent with the Reserve Bank of Australia's (RBA's) target range for inflation of between 2 and 3 per cent. The 3.7 per cent real risk free rate implied by a nominal risk free rate of 6.12 per cent and an inflation rate of 2.6 per cent was argued to be in line with prevailing yields on indexed bonds.

BARA supports the Commission's usual approach to inflation with reservations:

The main weakness with using indexed bonds is that the market may not be very deep however this is not considered to be a significant problem and it is suggested that the approach recommended by IPART, ORG and the Commission be adopted. In the Adelaide Airport decision the Commission used an inflation assumption of 2.54% based on the divergence between indexed and nominal 5 year bond rates. Such an approach is supported by BARA but using more recent information for 10 year bond rates.<sup>230</sup>

## 10.4.4 Commission assessment

The Commission considers that the use of market-based inflation expectation is the most appropriate measure of expected inflation. As in past decisions, a market inflation measure can be inferred by deriving the implied expectation of inflation existing between nominal and indexed bonds of the same maturity and term. In this case, it means calculating the difference between the chosen nominal 5-year bond yield and the yield on indexed bonds of corresponding maturity.<sup>231</sup> The Fisher equation is then applied to the two yields to arrive at the inflation figure.

Although there are many respected sources providing inflation forecasts, the Commission considers that the use of market-inferred inflation forecasts is most consistent with the view that the WACC is a forward-looking market-based number, in concept and in regulatory practice.

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<sup>228</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 144.

<sup>229</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 85

<sup>230</sup> Board of Airline Representatives of Australia, (2) op. cit., p. 7.

<sup>231</sup> These were extrapolated from the yields on August 2005 and August 2010 series capital indexed bonds

The Commission has decided to again adopt the market-inferred method of deriving inflation, as implied by difference between nominal and real bond rates and notes its consistency with the DRP.

At the time of this draft decision, the 5-year real bond rate is 3.02 per cent. Using the Fisher equation, this implies an expected inflation rate of 2.44 per cent.

## 10.5 Cost of Debt

The typical practice in determining a company's future cost of debt capital is to nominate a debt risk margin over and above the risk free rate, which is assumed to reflect what a firm of similar credit risk with an efficient capital structure could be expected to obtain.

### 10.5.1 SACL proposal

SACL assumes a 1 per cent debt margin over and above the risk free rate.

### 10.5.2 Views of interested parties

BARA submits that the maximum debt premium for SACL is 1 percentage point over the chosen bond rate.

BA/IATA "broadly agrees with [SACL's] approach."<sup>232</sup>

Brisbane Airport argues for much higher debt margins than that proposed.

### 10.5.3 Discussion

SACL nominates its debt margin on the basis of it being "a conservative estimate of the cost of debt which lies at the mid-point of the industry benchmark range" of 0.8-1.2.

SACL recognises:

that recent regulatory decisions have tended to use industry-wide benchmarks for the cost of debt rather than allowing for the specific debt position of the regulated company – reflecting regulators' desire to provide incentives for the regulated business to source and manage their capital as efficiently as possible. From an economic viewpoint, SACL believes that this principle is sound, and is consistent with an incentive-based approach to regulation.<sup>233</sup>

Brisbane Airport cites and endorses United Energy's submission based on Westpac's advice on the debt margin published in the recent Office of the Regulator General electricity decision:

...if [United energy] wanted to finance in index-linked terms ... it would cost between 145 basis points or 210 basis points for 10 or 15 year terms (based on its current A- credit rating ... United Energy concluded that a debt margin of 200 basis points is warranted."<sup>234</sup>

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<sup>232</sup> International Air Transport Association, (1) op. cit. *Attachment A: Costs of capital and rate of return*, p 2

<sup>233</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 6.

<sup>234</sup> Brisbane Airport Corporation Ltd, op. cit., p 16-17.

#### 10.5.4 Commission assessment

The Commission notes the benchmarked approach of SACL in determining its debt margin over the risk free rate. The experience in Australia suggests that a 1.0 per cent debt margin is a reasonable benchmark for companies with similar debt risk characteristics to SACL.

Davis notes that the debt margin did “not seem unreasonable...”.<sup>235</sup>

The Commission accepts SACL’s proposed debt margin of 1 per cent.

### 10.6 Cost of equity

In evaluating a firm’s cost of equity capital, or required rate of return to equity, it is usual regulatory and corporate financial practice to apply the widely known and accepted CAPM model. Whilst it has its detractors in the academic and financial community, the Commission will abide by the preference of its DRP and maintains that it remains the most preferable of methods to calculate the cost of equity.

The CAPM stipulates that a firm’s cost of equity ( $R_e$ ) is given by the following relationship:

$$R_e = R_{fr} + \beta_e(MRP),$$

where  $R_{fr}$  = risk free rate of return,  $MRP$  (market risk premium) =  $R_m - R_{fr}$ , and  $\beta_e$  = equity beta.

In the CAPM context, the two contentious variables involved are the beta and  $MRP$ .

#### 10.6.1 Beta

One of the most important and difficult aspects of the Commission’s assessment of an airport’s proposed weighted average cost of capital is the determination of the appropriate equity beta to be used in calculating the CAPM-based cost of equity. The source of the difficulty lies in the fact that none of the airports in Australia are listed companies. Hence equity betas cannot be obtained in the traditional manner of direct econometric estimation involving observations of performance over several periods on the stockmarket.

A proxy-based approach is thus necessitated. Primarily this involves the choice of an asset beta, which is a de-levered equity beta, resulting from the removal of the financial risk (due to gearing) component embedded in equity beta. Asset betas thus enable ready comparison of betas between companies of varying gearing levels.

Once the appropriate asset beta has been selected, it can then be re-levered into an equity beta, which is the required variable in the CAPM-based calculation of the risk adjusted cost of equity.

#### *SACL proposal*

SACL proposes the use of an asset beta of 0.70. This is then re-levered into an equity beta of 1.30 using the Appleyard and Strong formula and a debt beta of 0.08.<sup>236</sup>

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<sup>235</sup> Davis, op. cit., p. 10.

### *Views of interested parties*

BARA presents a case against the adoption of 0.70 as the asset beta for Sydney Airport. BARA considers that the appropriate asset beta should be 0.40 under a dual till approach and 0.45 under single till approach. BA/IATA supports BARA's views on asset beta.

Melbourne Airport maintains that it "can see little reason why SACL should not be accorded the same asset beta as the other major airports, that is, 0.70".<sup>237</sup> Perth and Brisbane Airports support SACL's proposal of a 0.70 asset beta.

### *Discussion*

SACL proposes an asset beta of 0.70, based on an assessment of the risk of airports relative to other utilities, the betas of several listed international airports, and recent regulatory decisions in Australia.

SACL notes that

...arriving at a beta estimate for a company such as SACL is largely a matter of judgment... In practice then a proxy beta needs to be determined, drawing on information on the beta estimates of other firms operating in similar operating environments, making adjustments for market differences as appropriate.<sup>238</sup>

The major issues are discussed under the headings as outlined by SACL in its revised proposal.

### *Airport risk versus risk in energy sectors*

SACL is of the view that the risk profile of SACL's aeronautical business is significantly greater than that for energy network businesses. The main reasons for this are argued to be:

- Airports are likely to be more susceptible to downturns in economic circumstances, eg, airline scheduling and passenger numbers are likely to be more sensitive to the state of the economy relative to the demand for gas and electricity;
- Airport earnings are becoming increasingly volatile as airlines increase flexibility through alliance agreements, fleet evolution and the relaxation of international air services agreements. While in the past airlines have been relatively slow to respond to changes in regional economic conditions, they now respond very quickly. Airlines face direct substitutes from other forms of transport. There are now increasing alternatives such as video conferencing for business travel.<sup>239</sup>

BARA criticises SACL's overall approach to asset beta on the basis that it:

- ...provides limited evidence to substantiate its assumed asset beta. It appears that SACL's assumed asset beta is based on the asset betas adopted by regulators in Australia for a number of selected utilities. ... Rather than presenting any empirical evidence to substantiate its conjectures, SACL hypothesises why the systematic risk may be greater for airports than for gas and electricity.<sup>240</sup>

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<sup>236</sup> The Appleyard and Strong formula for re-levering asset betas up to equity betas is as follows:  $Ba + (Ba - Bd)\{1 - (Kdn/1 + Kdn)Te(1 - g)\}D/E$ .

<sup>237</sup> Australia Pacific Airports Corporation, op. cit., p. 11.

<sup>238</sup> Sydney Airports Corporation Ltd, (2) op. cit., p 89.

<sup>239</sup> Ibid., p 92.

<sup>240</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 146.

- SACL's proposed asset beta is significantly above those used by other regulated industries...Although [it may be the case, as SACL have argued, that the risk profile of SACL's aeronautical business is fundamentally different and significantly greater than that of energy network businesses] BARA is of the view that it must be fully tested rather than based on conjecture.<sup>241</sup>

BARA presented a list of asset betas for relevant industries on the Australian Stock Exchange. BARA points out in particular that the asset betas for infrastructure and utilities, and telecommunications, at 0.46 and 0.41, are significantly lower than SACL's proposed asset beta.

*Previous Commission approaches to asset betas*

In regard to the Commission's income elasticity approach to asset beta determination, BARA is of the view that empirically determining the relative systematic risk across Australian airports is a difficult exercise. BARA views the Commission's approach as problematic. BARA points out that the link between aeronautical revenues and passenger numbers is not one-for-one. BARA maintains that to the extent the charging basis differs between airports or changes over time, the Commission's analysis may give a misleading picture.

Moreover, BARA argues, the Commission's approach, for it to be robust, must be consistent with more direct measures of the correlation between passengers and real Gross Domestic Product (GDP). BARA calculated correlation coefficients between passengers and real GDP at major Australian airports and argues that from a statistical perspective, "it is not possible to conclude that there is any difference between correlation[s] ... across the airports."<sup>242</sup>

In proposing an asset beta in line with that applied to other airports, SACL underlined the importance of regulatory consistency.

BARA argues that on the basis of more recent information, the 0.61 asset beta the Commission used for Adelaide Airport is too high.<sup>243</sup> BARA investigated a range of asset betas of listed foreign airports. The average asset beta was calculated to be 0.53, which compares to the 0.59 used as the basis for the Adelaide Airport MUIT decision, which according to BARA has apparently formed a loose precedent for subsequent Commission decisions. BARA stated:

...that the usefulness of the comparisons is limited by the extent to which economic conditions, tax effects, and other relevant factors differ across countries. Nevertheless, BARA is of the view that these comparisons can provide a useful indicative range within which the asset beta for Sydney Airport should lie... SACL's proposed asset beta is toward the top-end of these estimates and significantly above the average for the sample.<sup>244</sup>

BARA advances additional arguments as to why the true average asset beta of foreign airports is indeed lower than 0.53.

Firstly, that the Commission's use of Auckland Airport's 0.66 asset beta in the comparison is questionable. Its asset beta was based on only 17 monthly observations, which is less than the 5 years argued by BARA to be required for a reliable estimate. A larger sample of weekly

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<sup>241</sup> Ibid., p. 154.

<sup>242</sup> Ibid., p 152.

<sup>243</sup> See the Adelaide Airport MUIT decision: Australian Competition and Consumer Commission, (5) op. cit.

<sup>244</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 147.

observations yields an estimate for Auckland Airport of 0.4. Were this to be used instead of 0.66, the average beta for the Commission's decision would have been 0.55. Use of more recent information for all the four airports used leads to an asset beta of 0.50.

Secondly, BARA criticises the use of "adjusted" betas in the Adelaide Airport MUIT decision. BARA explained that the adjusted asset betas adjust for mean reversion towards an equity beta of 1 (the Blume technique). BARA suggests that the use of adjusted betas is not the predominant industry technique, and prefer the use of "raw" betas derived using the Vasicek method. Using raw betas, the average asset beta of the comparator airports drops to 0.45.

Finally, BARA argues that it must be recognised that the asset betas for the listed foreign airports do not differentiate between the aeronautical and non-aeronautical sides of their business. Although not in favour of a dual till approach, were one to be adopted, it is argued that it is likely that the systematic risk associated with non-aeronautical services is greater than that for aeronautical services. Therefore it could be expected that the asset betas for the foreign listed airports would be dragged lower still if only the aeronautical side of their operations was considered.

SACL believes that the airlines oversimplify the apparent 'mistakes' by the Commission in the Adelaide decision. SACL argued that:

it is by no means established that it is raw betas (and not adjusted betas) that should be used in the derivation of a proxy beta. It is widely accepted that prior expectations are relevant in estimating betas ... Morin states

*The regression tendency of betas to converge toward one is very well known and widely discussed in the financial literature. Because of this regressive tendency, a company's raw unadjusted beta is not the appropriate measure of market risk to use. Current stock prices reflect expected risk, that is, expected beta, rather than historical risk or historical beta. Historic betas, whether raw or adjusted are only surrogates for expected beta. The best of the two surrogates is adjusted beta.*<sup>245</sup>

SACL doesn't perceive the short time span of Auckland's observation to be a major methodological problem. "The longer the time period taken, the more data is available but the less relevant the data is to the present circumstances of a firm..."<sup>246</sup>

SACL argues that it was possible to provide examples of beta observations on either side of the argument, "suggesting there is little merit in discrediting the Commission decision by simply using more data".<sup>247</sup>

SACL also contends that that Sydney Airport's asset beta is likely to be somewhat higher than that for Adelaide Airport on account of its position as a domestic and international hub, and its much higher exposure to the volatility in tourist markets. SACL notes that this was supported by airlines at the time of the Adelaide Airport MUIT decision - the greater riskiness of hubs as compared with non-hubs.

#### *Passenger variability*

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<sup>245</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 94.

<sup>246</sup> Id.

<sup>247</sup> Ibid. p 95



SACL argues that:

it is important to note that any estimate of beta must be grounded in arguments about fundamental systematic riskiness. With this context, it is not passenger volatility per se that constitutes risk, but rather factors that cause fluctuations in earnings relative to fluctuations in earnings of the market portfolio.<sup>248</sup>

SACL argues that the composition of demand is another important factor in its systematic riskiness:

The fact that SACL's revenue is significantly more dependent on the inflow of international travellers, whose demand is likely to be more elastic and more susceptible to downturns in the economy, would suggest a higher beta estimate for Sydney Airport relative to the other Australian airports, all else equal.<sup>249</sup>

SACL also makes the point that the structure of prices is relevant for beta:

[s]imilarly the proposed change in the charging basis for the international terminal charge (from a tonnage based charge to a passenger based), would also suggest a higher beta ...<sup>250</sup>

SACL maintains that its high operating leverage (the extent to which the cost structure is fixed) also warranted a raise to its beta.

SACL also states that to the extent that the regulations applicable to SACL are less clear than those pertaining to other airports, this should be reflected in a regulatory risk premium in SACL's rate of return. SACL noted however, that it "recognises that this essentially is a firm specific risk (and therefore not explicitly relevant in the estimation of beta in the CAPM framework)".<sup>251</sup>

### *Size effect*

SACL engaged National Economic Research Associates (NERA) for advice on the validity of the airlines' arguments regarding the "size effect". The size effect refers to the recent theory in finance that proposes an inverse relationship between firm size and beta. In particular, it claims to show empirical findings that suggest that a small firm has a larger beta than that which could be explained under the traditional CAPM model.

NERA's analysis demonstrates that the airlines have presented a partial view of the literature, contrary to the airlines' advisers' claim that: "I don't think you could [find articles that say that the size effect is ambiguous]; I think you are wrong."<sup>252</sup>

SACL notes a point made by Patterson in the article cited by the airlines' advisers:<sup>253</sup>

To sum up, tests of the CAPM using realised returns as proxies for the ex ante variables in the model are at best ambiguous, with results dependent on the periods used and the methods employed...<sup>254</sup>

SACL cites Brealey and Myers' textbook:<sup>255</sup>

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<sup>248</sup> Ibid. p 96.

<sup>249</sup> Id.

<sup>250</sup> Id.

<sup>251</sup> Id.

<sup>252</sup> Ibid., p 97.

<sup>253</sup> Patterson C, S, *The Cost of Capital: Theory and Estimation*, 1995, p 58.

<sup>254</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 97.

<sup>255</sup> Brealey and Myers, *Principles of Corporate Finance 3<sup>rd</sup> Edn*, 1988, p 188.

... if you look long and hard at past stock returns you are bound to find some strategy that just by chance would have worked in the past. This practice is known as “data mining” or “data snooping.” Maybe the size and beta results are simply chance results, the effects of data snooping.<sup>256</sup>

SACL argues that:

To the extent it is believed to exist, empirical evidence on the size effect is strongest for the lowest 10<sup>th</sup> percentile of companies. However, neither Adelaide, Brisbane, Perth, nor Sydney are likely to have a market capitalisation that was anywhere near the modest threshold implied by this figure. The size effect being referred to simply does not apply within the range of companies being considered.<sup>257</sup>

Melbourne Airport states that the jury is still out on the size effect:

Even if the small firm theory was valid, it should not be used to argue that simply because a firm in an industry is larger than one of its competitors it should have a smaller asset beta. The small firm theory is not continuous but really applies to firms whose size is below some threshold level. Our view is that SACL and all Phase I airports are above that level.<sup>258</sup>

### *Commission assessment*

Beta arises in the context of the CAPM equation, in the guise of an equity beta.<sup>259</sup>

The purpose of a beta is simply to measure the sensitivity of the return on an individual investment to changes in returns for the market as a whole.

More formally, the beta of any entity (project or firm) is defined as the covariance between its return  $R_j$ , and the market portfolio's return,  $R_m$  divided by the variance of the market return:

$$B_j = \frac{\text{Cov}(R_j, R_m)}{\text{Var}(R_m)}$$

Under standard econometric assumptions it coincides with the slope coefficient of the “line of best fit” in a regression of the entity's return with that of the market; that is:

$$R_j = a + bR_m + e_j,$$

where  $a$  is the intercept, and  $e$  is a mean zero residual un-correlated with  $R_m$ .

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<sup>256</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 98.

<sup>257</sup> Id.

<sup>258</sup> Australia Pacific Airports Corporation, op. cit., pp. 11-12.

<sup>259</sup> As alluded to above, asset beta is the beta that would apply if the company were 100 per cent financed by equity, thereby eliminating the effect of leveraging. The equity beta takes account of the effect of mixing equity and debt. A higher level of gearing, *ceteris parabis*, increases the risk to equity-holders, and hence the equity beta, since it is debt holders who are compensated first out of the firm's revenues, and in the event of insolvency. However the risk associated with an asset's cash flows is given irrespective of the financing used in purchasing the asset. The conversion from an equity beta to an asset beta attempts to divorce the risk arising to the *entity* purely due to financing arrangements, from the inherent risk of the underlying assets' cash flows. Meaningful comparisons between the airports on the basis of risk can only be made once the layer of financial risk is removed.

Being specified in this way, beta then captures the *systematic* risk component of the *total* risk of a company's returns. Also called "non-diversifiable risk", it is that type of risk that cannot be eliminated by diversification, so that the expected systematic returns have an inescapable correlation with market returns. This would imply that for an investor to seek a different *ex ante* return, he/she would have to select a stock with a different systematic risk/beta.

However systematic risk is not the only risk associated with investing in a particular stock; risk has two components – the systematic risk already discussed, and the non-systematic, or *specific*, risk. In contrast to systematic risk, specific risk arises due to volatility (variance) unrelated to movements in the broader market. The assumption of investors' risk aversion means that specific risk will be diversified away by investors, leaving only the systematic and non-diversifiable component of risk to affect the *required* rate of return.

To illustrate, given two stocks of equal systematic risk, investors will choose to allocate their funds to the stock with less specific risk. That is, even if the two stocks have the same expected return, the very presence of higher specific risk will cause risk-averse investors to shy away from the stock. Thus the capital market operates such that investors are not rewarded for holding risk which they can eliminate through diversification and market prices of financial assets adjust so that they only earn a reward for market/systematic risk, measured by beta.

In assessing risk at airports for the purposes of the cost of capital, this implies that investors are not and will not be compensated through the CAPM for the specific risk of their projects. Hence the assertion often made that all variability translates into systematic risk is a misapplication of the risk theory underlying the CAPM. Only the *covariance* of the company's returns with market returns is relevant in determining the degree of risk for the CAPM, rather than the *variance* of the stock itself, which would include the diversifiable specific risk component, in addition to the market risk component.

The correlation of the company's returns to investors to the returns on the market as captured by beta suggests a more direct and company-specific method of deriving an asset beta. The income elasticity of demand, as has been noted in past Commission decisions, is argued to form the basis of the most natural proxy for this purpose. The close relationship between asset beta and the income elasticity of demand is more apparent with a careful illustration of the respective concepts:

- Asset beta = the change in investor returns arising from, or associated with, a given change in the returns on the market as a whole.
- Income elasticity of demand = the change in demand for a good arising from a change in consumer's income.

For the income elasticity to be used to shed light on the likely asset beta of a company, a number of important links between various components of the concepts must be established:

- returns are correlated strongly to revenues.
- changes in market returns are correlated to changes in GDP.
- Changes in GDP are correlated to changes in passenger income.

Since returns to investors are unknown for an unlisted company, revenues can be seen as constituting a close proxy to investor returns. Similarly, it is argued that the returns to the

market as a whole can be proxied by the movements in national GDP. Taking this concept, it is important to assess the determinants of revenue. In the case of airports, the most obvious source of aeronautical revenue is that provided by the major users, those being airlines. Ultimately however, the revenue derives from passenger numbers (especially in the case where a passenger based charge is being determined). This implies that the revenues, and hence the returns to an airport investor, are ultimately linked to the throughput of passengers.

However, it must be noted that most Australian airport charges are based on the MTOW of an aircraft type, which will not vary in direct proportion to passenger numbers. For example, where airlines respond to growth in passenger numbers by scheduling a greater frequency of smaller jets, the growth in MTOW is likely to be less than the growth in passengers; because smaller jets have a lower MTOW:passenger ratio. Therefore, where airport charges are MTOW-based then aircraft type may be an important variable.

There would not of course be uniform income elasticities across the various passenger groups defined by country of origin and motivation for travel. If that were the case, then it would imply very similar asset betas for all the airports. Undoubtedly, each passenger group would react differently in respect of travelling demand to changes in their collective income, which suggests different income elasticities for different passenger groups. An airport's passenger risk can then be analysed by breaking down its passenger traffic into passenger groups, and then, using income elasticities, a weighted average income elasticity can be generated, which acts as the proxy for asset beta.

The approach involves obtaining information on income elasticities. Studies such as the Bureau of Transport and Communication Economics study of passenger elasticities and the review of travel demand elasticities by the Institute of Transport Studies, University of Sydney<sup>260</sup> provide a lot of the required information for this approach to be operationalised.<sup>261</sup> The other key type of information is suitably disaggregated passenger numbers at each airport, in order to determine the various proportions of passenger groups.

The income elasticities approach provides a close approximation to what would normally be captured by an asset beta. This is based on the observation that the weighted sensitivity of revenues to changes in income of customers, is likely to be mirrored in stock market performance, particularly the correlation of returns to those of the market.

In contrast, the use of comparisons as a method of deriving asset betas is fraught with difficulties if it acts as the sole generator of the required asset beta.

The comparison method involves selecting a range of betas of listed comparable entities, applying a de-levering process, and basing the airport's asset beta on the result.

The validity of this method very much turns on the degree of similarity between the selected firms and the airport in question. The obvious point of comparison is other airports. The similarity need not be manifest however, in the exact output of the companies. It is not necessarily the case that reference to other airports should be made as the sole basis for comparison.

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<sup>260</sup> Paul Hooper, "The elasticity of demand for travel: a review", *Institute of Transport Studies, Graduate School of Business*, 1993.

<sup>261</sup> Bureau of Transport and Communication Economics, *Working Paper 20 - Demand elasticities for air travel to and from Australia*, Commonwealth of Australia, 1995.

A range of characteristics are important in assessing the suitability of comparators. Lally<sup>262</sup> identifies several, including:

- Nature of the firm's output: "the returns of firms producing products with low income elasticity of demand (necessities) should have lower sensitivity to real GNP shocks than firms producing products with high income elasticity of demand (luxuries), because the demand for the product is less sensitive to real GNP shocks."<sup>263</sup>
- Duration of its contracts: "the returns of firms with greater duration for these contracts should have lower sensitivity to real GNP shocks, because their output/input prices will not immediately respond to such shocks"<sup>264</sup>
- Regulation: Lally argued that firms subject to price or rate of return regulation should have lower sensitivity to positive real GNP shocks, because prices cannot be increased in response.

The selection of suitable companies is a challenging exercise. Whilst selecting other airports as the basis of comparison may provide a reasonable degree of similarity, foreign airport betas are less useful to the extent that economic conditions, regulatory regimes, tax effects and other country and firm-specific factors are significantly different.

A further complication is that selecting a single entity's beta as the appropriate beta is highly problematical from a statistical point of view. Lally states that "estimates from a single company are subject to considerable statistical error. A typical standard error is about 0.20 so that the 95 per cent confidence interval would be about  $\pm 0.4$ . So an average company with an estimated beta of 1.0 will have a 95 per cent confidence interval ranging from 0.6 to 1.4".<sup>265</sup> Thus, even for listed companies, it can be argued that the use of comparisons is still of benefit, as a form of reality check on the point estimate.

Thus the method of taking one or just a few beta observations as the basis for an asset beta is considered by some experts to give rise to inaccurate and unrepresentative beta estimates.

The case for the proxy approach is strongest when a passenger based charge is being determined and applied as a funding mechanism for new investment. The relationship between income elasticities and asset beta is most clearly apparent in this case. However, as discussed, in the case of MTOW-based charges, the sensitivity to income changes could be expected to be moderately blunted, due to the capacity of airlines to use smaller craft in response to pax growth.

This elasticity approach was applied to Sydney Airport's revenues. The result was that it has the lowest weighted average income elasticity of passenger demand out of all the major Australian airports. It is argued that this strongly suggests that its asset beta is also in the lower end of the range applied to other airports.

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<sup>262</sup> M Lally, *The cost of equity capital and its estimation*, Vol. 3 McGraw-Hill series in Advanced Finance, 2000.

<sup>263</sup> Lally, op. cit. p. 27.

<sup>264</sup> Ibid., p. 28.

<sup>265</sup> Ibid., p. 26.

The existence or not of the size effect in finance is an issue that has received an increasing share of debate in recent times. The Commission is not in the position of deciding on the relative merits of the opposing sides but has the following reservations:

- The size issue is not likely to be directly applicable to SACL’s required returns – its approximate market value would not be high or low enough to breach any relevant thresholds.
- The lack of an established theoretical foundation for the size effect.
- The difficulty and arbitrariness in applying an appropriate size premium.

Davis viewed SACL’ proposed beta as “somewhat higher than that used by the ACCC in the case of other airports and slightly higher than for listed airports overseas”.<sup>266</sup>

The Commission wishes to emphasise that the determination of an appropriate asset beta for an unlisted company requires not inconsiderable regulatory judgment. However, the Commission considers that on the balance of theory and empirical evidence, an asset beta of 0.60 represents the most reasonable estimate of the asset beta of firms of the nature of Sydney Airport.

The Commission considers that an asset beta of 0.60 is most likely to reflect the true nature of the systematic risk characterising its returns. Accordingly, an asset beta of 0.60 will be applied to SACL’s required return on equity, which through the use of the Commission’s preferred de-levering formula<sup>267</sup>, results in an equity beta of 1.367.

### 10.6.2 Market risk premium (MRP)

The MRP is the compensation required by equity investors for assuming the extra risks (systematic volatility) associated with providing funds to a general basket of “risky” assets (such as a stock portfolio) over risk-free assets.

#### *SACL proposal*

SACL assumes a MRP of 6.0 per cent

#### *Views of interested parties*

BARA maintains that 5.5 per cent represented an upper limit for the MRP.

#### *Discussion*

SACL notes that:

the weight of opinion and analysis has been shifting towards a view that the market risk premium is falling both in Australia and elsewhere, and that the traditional long-term average range of 6.0-8.0 per cent is no longer appropriate.<sup>268</sup>

<sup>266</sup> Davis, op. cit., p. 9.

<sup>267</sup> The Commission uses a version of the Appleyard and Strong formula, developed by Monkhouse, which adjusts for the presence of gamma:  $B_a + (B_a - B_d)\{1 - (K_{dn}/1 + K_{dn})T_e(1-g)\}D/E$ .

<sup>268</sup> Sydney Airports Corporation Ltd, (2) op. cit., p. 87.

SACL points out that recent regulatory decisions have adopted a range of 5.0 – 7.0. SACL therefore chose the midpoint (6.0) of this range as its MRP assumption.

SACL notes that “there are no ‘right’ historical time periods to use for estimating the MRP... Ideally, [given that it’s a forward-looking concept] any estimate would also take into account analysts’ forecasts of expected returns.”<sup>269</sup>

BARA argues that:

SACL failed to justify its assumption...[and] failed to adequately consider a large body of evidence that suggests that the market risk premium is now significantly below 6 per cent.<sup>270</sup>

....

Based on the empirical evidence for the past 12 years suggesting the market risk premium is in the range of 3-4% and the Commission’s recognition that recent studies would not support a market risk premium in excess of 6%, SACL’s proposal of a 6% market risk premium is considered to be at the high end of a reasonable range. It is considered that a market risk premium of 5.5% would be a conservative upper estimate in the light of recent observations of the market risk premium. As suggested there are strong arguments for a much lower number of 3-4% but 5.5% is suggested as a generous compromise.<sup>271</sup>

Davis states that 6.0 per cent “seems reasonable”.<sup>272</sup>

#### *Commission assessment*

The Commission acknowledges the various complexities and uncertainties involved in the estimation of this parameter.

The adoption of a MRP has difficulties not unlike those associated with deriving beta, in that it will typically involve an estimate of an historical variable for use as a proxy for a forward-looking ex ante variable.

BARA’s argument in relation to the 3-4 per cent observed market risk premium is noted, however caution should be exercised when attempting to observe unstable variables such as the MRP over a relatively short period. As noted in the DRP,

In summary, the market risk premium is an inherently poorly defined parameter with considerable uncertainty associated with its estimation.<sup>273</sup>

However, it is acknowledged that on balance, empirical evidence, and reforms such as dividend imputation and the recommendations of the Ralph Report on the Review of Business Taxation<sup>274</sup> tend to suggest a MRP that is declining, rather than increasing over time in Australia.

A survey of recent studies of the Australian MRP reveals a wide range of market risk premia, and indeed a discernible declining trend. The studies suggest that the MRP is unlikely to be

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<sup>269</sup> Ibid., p. 8.

<sup>270</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 145.

<sup>271</sup> Board of Airline Representatives of Australia, (2) op. cit., p. 10.

<sup>272</sup> Davis, op. cit., p. 9.

<sup>273</sup> Australian Competition and Consumer Commission, (3) op. cit., p.79.

<sup>274</sup> A review of the business tax system, chaired by John Ralph, led to the Ralph Report on the Review of Business Taxation, ultimately contributing to the enactment of the *New Business Tax System (Miscellaneous)*, Act Number 79, 2000.

in excess of 6.0 per cent. In addition, the more stable inflationary environment now prevailing would also likely have reduced the MRP in recent times. However, the Commission remains to be convinced that the Australian MRP is decidedly lower than 6 per cent. Therefore, for the purposes of this draft decision, the Commission has no objection to the MRP assumption of 6.0 per cent adopted by SACL. Davis supports this approach.

The Commission has decided to adopt a market risk premium of 6 per cent.

## **10.7 Capital Structure**

In order for an entity's WACC to be determined, its capital structure, or gearing levels, must be specified. The capital structure refers to the use of debt and equity capital in the financing of a firm's assets. The entity's debt and equity proportions are then used in the calculation of equity beta, the debt margin, and the weights applied in the WACC.

### **10.7.1 SACL proposal**

SACL assumes a 50 per cent gearing level (of the ODRC value of assets).

### **10.7.2 Views of interested parties**

BARA argues that:

The normal regulatory practice is to specify a capital structure consistent with efficient financial management and in particular the minimisation of the cost of capital in a similar and efficient commercial enterprise.

The usage of debt affects the cost of capital because of the value of interest deductibility. However it is recognised that as the capital structure changes so should the equity and debt Betas so that within reasonable ranges, changes in the capital structure should have little impact on the overall cost of capital. The Commission is well aware of this issue and in the case of the Brisbane Airport decision accepted a 50:50 debt equity split (implying much lower gearing than the current actual gearing) provided that a reasonably low debt margin of 100 basis points was associated with it (Commission 2000a).

BARA sees no reasons to use a gearing ratio for Sydney Airport that is inconsistent with that used by the ACCC for other major airports in Australia. BARA submits that the appropriate gearing ratio for Sydney Airport is 60/40.<sup>275</sup>

### **10.7.3 Discussion**

SACL notes that this is lower than the more usual 60 per cent gearing assumption used by regulators for energy utilities, which was argued to reflect that airports have a lower capacity to hold debt. SACL points out that whilst 50 per cent is below the apparent gearing levels of other Australian airports, airports elsewhere typically also have lower gearing levels.

### **10.7.4 Commission assessment**

The tax shield of debt means that the WACC will generally decline with increasing leverage under a classical or imputation (with gamma less than one) company tax system.

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<sup>275</sup> Board of Airline Representatives of Australia, (2) op. cit., p. 10.



Davis argues that a gearing ratio of 50 per cent “does not seem unreasonable”.<sup>276</sup>

As noted by SACL, in regulated applications, where the firms are usually of the infrastructure kind, it is most common to apply a 60 per cent gearing ratio. The Commission considers that a benchmarked approach to the gearing ratio has advantages both in efficiency and simplicity. Therefore, the Commission’s decision is to adopt a 60 per cent gearing ratio for the purposes of this draft decision. The Commission notes, as it has in other decisions, that varying the adopted gearing assumption does not have significant impacts on the ultimate calculated WACC figure, given the offsetting channels provided by the equity (levered) beta and the favoured tax treatment of debt. Given this, the Commission regards as reasonable a benchmarked gearing ratio of 60 per cent.

The Commission will adopt will adopt a debt/equity ratio of 60:40 for this draft decision.

## **10.8 Taxation**

### **10.8.1 SACL proposal**

As discussed, SACL has followed the approach outlined in the Commission’s DRP in adopting a post-tax WACC formulation with which to calculate revenues. This entails tax being treated as a cost in the expected cash flows, rather than accounted for in a higher return. SACL’s adoption of this approach was based on the difficulty in determining the effective tax rate as is necessary in the pre-tax approach. Therefore, SACL has explicitly developed and incorporated into its cash flow projections expectations of SACL’s future tax liabilities. SACL projected its future cash flows using a 30 per cent corporate tax rate, in line with the Ralph Report’s recommendations.

### **10.8.2 Commission assessment**

The Commission accepts the use of 30 per cent as the statutory rate of corporate tax with which to calculate future accounting tax payable. The Commission notes as has SACL that, under a post-tax WACC approach, most of the tax issues relevant to this decision are extant in the modelling of expected future cash flows, rather than in the WACC itself. The process of incorporating tax outflows into the cash flows is discussed in the financial modelling section.

## **10.9 Imputation factor**

The dividend imputation system in Australia compensates investors for the tax paid out of company earnings through the distribution of franking credits, recognising that tax paid at the company level effectively represents the pre-payment of personal tax. These franking credits have value in the hands of investors, and accordingly are accounted for in the determination of WACC. The extent to which they are of value, from 0 to 1, is captured by the gamma factor.

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<sup>276</sup> Davis. op. cit., p. 10.

### 10.9.1 SACL proposal

SACL proposes to adopt a franking credits utilisation factor, or gamma, of 0.50.

### 10.9.2 Views of interested parties

BARA argues that a gamma of close to 1 was justified, and that there is strong evidence that 0.50 is too low.

### 10.9.3 Discussion

SACL noted that the extent to which franking credits are able to be utilised...

primarily depends upon the circumstances of its shareholders. Shareholders who may be unable to utilise franking credits include institutional investors facing low or zero effective tax rates, foreign investors, ... and in SACL's case this ability is moot, given that its owner, the Federal government, cannot derive any explicit benefit from franking credits: "the fact the Federal government is the receiver of both corporations tax payments and dividends means that the role of franking credits is somewhat artificial."<sup>277</sup>

However, in line with the competitive neutrality principles as set out in the Competition Principles Agreement, SACL submitted that the specific tax circumstances should not bear on regulatory decisions, but rather the assumption that the regulated business is owned by a [typical] average investor in Australian equities.

SACL assumes a gamma of 50 per cent on the basis of the parameter chosen in recent regulatory decisions. SACL stated that

it should be noted, however, that SACL's high effective tax rate means that a significant proportion of its available credits would not be able to be made available to an investor, implying that the 50% assumption for the utilisation of franking credits is likely to be very conservative (ie high), relative to other regulated businesses in Australia.<sup>278</sup>

BARA argues strongly for a revision to the Commission's past approach to setting gamma at 0.50, irrespective of whether or not SACL's status of government ownership is recognised:

In the case of SACL the Commonwealth government is the sole shareholder and as such it pays no income tax so that dividend imputation credits cannot be used to reduce income tax. However this effectively means that full imputation applies in practice since the objective of dividend imputation was to eliminate double taxation of dividends (first at the company level and then at the personal level). Since for a government owned company such as SACL income is only taxed once, full imputation effectively applies...

In price determinations regulators have tended to focus on competitive neutrality in terms of a typical private commercial enterprise and have adopted imputation factors based on the average values observed in market transactions with judgmental adjustments for such factors as foreign ownership (if relevant) or special tax effects.

Even if it is considered that the tax advantage of government ownership should be ignored when determining an appropriate value for the gamma factor, there is strong evidence that the gamma used in recent regulatory decisions (of 0.5) is too low.

BARA presents the following table of estimated tax imputation (Gamma) factors:

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<sup>277</sup> Sydney Airports Corporation Ltd, (1) op. cit., p. 6-13.

<sup>278</sup> Ibid, p. 4.

Table :Estimated Tax Imputation (Gamma) Factors<sup>279</sup>

Entity/Author	Gamma
Hathaway and Officer (1996)	0.5
Bruckner, Dews and White (1994)	0.68
Brown and Clarke (1993)	0.72
Walker and Partington (1999)	0.88 to 0.96 <sup>a</sup>

<sup>a</sup> 0.88 for events and 0.96 for trades on average

It is important to recognise that foreign investors cannot fully use imputation credits and this would exert downward pressure on observed gammas. However, in relation to this point and after reviewing the literature Lally (1999, p.40) notes:

*However since the CAPM is domestic, it would be inconsistent to use an estimate affected in this way. Furthermore, the effect of recognising foreign investors only in this one respect would be to raise the cost of equity. However as previously discussed, the presence of foreign investors potentially has multiple effects and the net impact may lead to a reduction in the cost of equity for most firms. Hence an estimate of U (gamma) close to 1 seems justified.*<sup>280</sup>

BARA cites the opinion of Professor Davis reported in the Brisbane and Perth Airport necessary new investment decisions, arguing:<sup>281</sup>

“there is more evidence showing a value for gamma closer to one than evidence of gamma lower than 0.5.”

BARA then goes on to argue:

An additional relevant prospective factor is the impact of the Ralph tax reforms. It is important to recognize that under the Ralph tax reforms there are recommendations that are considered likely to greatly increase the average value of imputation credits (Ralph 1999). In particular, under recommendation 11.7a, refunds of excess imputation credits will be provided to resident individuals and complying superannuation funds. This would tend to exert upward pressure on gamma. Furthermore, an increase in the use of derivatives and hybrid equity instruments appears to be increasing the use of franking.

In submissions to other airports the airlines have been arguing that 0.5 is too low and have recently suggested at least a modest adjustment to 0.6 is reasonable. However it is suggested that, in the light of new information, such an adjustment would be extremely conservative and serious consideration should be given to the views of experts such as Davis and Lally for a gamma close to 1.<sup>282</sup>

#### 10.9.4 Commission assessment

As in the tax issue, the Commission notes that the value for the gamma parameter does not affect SACL’s WACC figure, but affects the cash flow calculations.

The Commission regards the use of the competitive neutrality approach in determining the gamma value for SACL as appropriate. Hence, whilst BARA is correct in pointing out that

<sup>279</sup> Board of Airline Representatives of Australia, (2) op. cit., p. 12.

<sup>280</sup> Ibid., p. 13.

<sup>281</sup> For example, see the following new investment decisions: Australian Competition and consumer Commission, (7) op. cit.; Australian Competition and Consumer Commission, (8) op. cit..

<sup>282</sup> Board of Airline Representatives of Australia, (2) op. cit., p. 13.

SACL's actual effective gamma would be 1 given its government ownership, it is assumed for the purposes of the cost of capital that SACL is a private enterprise.

Davis argued that "despite a 0.5 valuation being the 'conventional wisdom' the evidence from dividend drop-off studies on which this is based is relatively flimsy", and highlights recent evidence which he claims to "suffer from less data problems" than other studies. Davis argued that "the available evidence is more compatible with a value closer to unity than lower than 0.50."<sup>283</sup>

Given the lack of consensus surrounding the value for gamma, and in the absence of a clear trend emerging, the Commission has decided to adopt an assumption of 0.50 for gamma. However, the Commission wishes to signal its preparedness to alter this position for the final decision in light of recent trends in studies and other developments which suggest a higher value for gamma. The Commission notes the recent survey of literature by Lally<sup>284</sup> for example, which showed a gamma close to one on the weight of evidence, as one indication of an upwards trend in this parameter. Furthermore, the Commission acknowledges BARA's analysis of the implications on gamma of the Ralph Report recommendations and subsequent legislation. The greater usage of franking credits by resident individuals and superannuation funds arising as a result of these reforms would be likely to enhance the value of imputation to investors. The DRP's assumption of domestic investors comprising the shareholders of regulated companies is also a relevant consideration for future decisions.

The Commission's draft decision is to accept SACL's proposed gamma of 0.50.

## **10.10 Commission draft decision**

The Commission's draft decision is for the WACC parameters set out in the table on the following page.

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<sup>283</sup> Davis, op. cit., p. 10.

<sup>284</sup> Lally, op. cit.

**Table 10(a): WACC Parameters**

<b>WACC parameters</b>	<b>SACL proposal</b>	<b>Commission draft decision</b>
Inflation rate, %	2.60	2.44
Debt, %	50	60
Equity, %	50	40
Nominal risk free rate, %	6.12	5.53
Real risk free rate, %	3.43	3.02
Market risk premium, %	6.0	6.0
Asset beta	0.70	0.60
Debt beta	0.08	0.08
Equity beta	1.311	1.367
Corporate tax rate, %	30	30
Debt Margin, %	1.0	1.0
Nominal cost of debt, %	7.12	6.54
Franking credit utilisation - gamma	0.5	0.5
Post-tax cost of equity (CAPM), %	13.982	13.74
<b>Vanilla real WACC, (%)</b>	<b>7.75</b>	<b>6.81</b>

## ■ Chapter 11: Financial modelling

### 11.1 Introduction

As detailed in Chapter 3, the Commission does not object to the use of a building block methodology by SACL. Chapter 4 outlined the Commission's assessment of SACL's dual till approach. Chapters 5 through 10 detailed the Commission's decisions regarding the various components of such a building block. In applying this approach, SACL based its estimate of allowable revenue on a one-period financial model. By contrast, the Commission developed a building block model which calculated allowable revenues over a five year period. This section explains the reasons for this approach, and outlines the assumptions underpinning this dynamic model.

Section 11.2 summarises the key inputs into the building block model. Section 11.3 explains the Commission's approach to estimating the contribution from aeronautical-related services. Section 11.4 discusses the effect of volume growth, while section 11.5 describes the Commission's method of smoothing prices over the five-year period. The results of the Commission's financial modelling are summarised in section 11.6, and the Commission's draft decision is presented in section 11.7.

### 11.2 Building block approach

The following table compares SACL's proposed inputs against those the Commission used in determining an allowable revenue figure.

**Table 11(a): Building block components**

Variable	SACL's Proposal	Commission draft decision
Aeronautical Asset Base (2000/01)	\$1690m	\$1439m
Depreciation (2000/01)	\$46.7m	\$38.1m
Operating & Maintenance Expenditure (2000/01)	\$64.2m	\$56.4m
WACC (for detailed parameters see chapter 10)	7.7%	6.8%

### 11.3 Contribution from aeronautical-related services

As outlined in chapter 4, the Commission estimated a contribution from aeronautical-related services in determining an appropriate allowable revenue to SACL from aeronautical charges.

The contribution reflects the extent to which revenues generated from aeronautical-related services appear to be 'above normal'. That is, the contribution estimates the extent to which these revenues exceed the costs (including cost of capital) of providing these services.

SACL provided the Commission with additional information regarding the asset base and land area utilised in the provision of aeronautical-related services. Consistent with the treatment of aeronautical assets, non-land assets were valued on a DORC basis, while the land area was used by the Commission to impute an indexed historic cost valuation for aeronautical-related land. Depreciation for 2000/01 was estimated with reference to the weighted average rate of depreciation on aeronautical assets.

The Commission also obtained operating cost and revenue data from SACL's Regulatory Accounting Statements.<sup>285</sup> These were inflated to provide estimated operating and maintenance costs, as well as revenues, for 2000/01.

The cost of capital and taxation parameters were the same as those applied to SACL's aeronautical activities.

Using this information, the Commission estimated the required revenues to SACL which would justify the continued provision of aeronautical services. This estimate is then compared against the approximate revenues SACL currently receives from these services, with the difference representing the contribution from aeronautical services.

These values are summarised in the table below.

**Table 11(b): Aeronautical-related variables**

<b>Aeronautical-related variables (2000/01)</b>	<b>Commission Model</b>
Average Aeronautical-related Asset Base – Non-Land	\$95.3m
Average Aeronautical-related Asset Base – Land	\$37.2m
WACC	6.8%
Return on Capital	\$9.0m
Depreciation	\$3.6m
Aeronautical-related O&M Expenditure	\$28.6m
Net Taxation	\$0.8m
Modelled Aeronautical-related Revenues	\$42.0m
Forecast Aeronautical-related Revenues	\$64.6m
<b>Contribution - Aeronautical-related services</b>	<b>\$22.6m</b>

On this basis, the Commission estimated the appropriate contribution from aeronautical-related services in 2000/01 to be \$22.6m. This contribution is carried forward on an indexed basis over the modelled period.

<sup>285</sup> These are provided to the Commission for regulatory reporting purposes.

## 11.4 Traffic forecasts

In both its draft proposal and revised proposal, SACL has calculated an allowable revenue figure of \$243.2m, estimated for the 2000/01 year only. SACL therefore argues that its proposed revenue estimate of \$205.4m represents a discount of around \$38m on justified allowable revenues.

BARA argues, however, that SACL's approach fails to take account of changes in costs and revenues over time. As such, BARA argues that SACL will earn excessive returns in future periods as traffic volumes grow.

In order to ensure that SACL does not over-recover the costs of necessary new investment it is vital that the costs of capital are 'levelled' over time and the growth in revenues from traffic growth be taken in account. This has been the approach of the Commission. To date, SACL has failed to do either. In fact SACL has refused to provide BARA with traffic forecasts beyond 2000/01.<sup>286</sup>

The Commission's view is that future volume growth is highly relevant to determining an appropriate level of prices. During the course of its assessment process, the Commission obtained volume forecasts from SACL for the five year period to 2004/05. These forecasts were prepared for SACL by Tourism Futures International. SACL advised BARA that these could not be made publicly available due to probity issues that might arise as a result of the likely privatisation of SACL.

The Commission has used the forecasts provided by SACL in modelling future revenues and prices. Whilst BARA provided the Commission with alternative traffic forecasts, the Commission considers that the forecasts of an independent party provide the most appropriate benchmark.

## 11.5 Price path

There are two reasons for modelling SACL's costs and revenues using a multi-period financial model. The first reason relates to the regulatory framework. Applying the building block methodology over time would result in falling prices. There are three reasons for this:

- Traffic growth over the forecast period drives down unit costs;
- Operating and maintenance expenses are likely to fall (the draft decision assumes real reductions of around 5 per cent per annum); and
- Depreciation of the asset base results in a decline in the dollar return on capital over the forecast period.

Under the current arrangements there is no mechanism for the Commission to ensure SACL lowers prices in future as traffic volume grows and costs fall.

The second reason for using a multi-period financial model is to mitigate the immediate price shock to airport users. The financial modelling 'smooths' prices, translating the cost and revenue data into a constant nominal price over the forecast period, providing an equivalent net present value of cash flows to SACL. This 'smoothed' price generates steadily increasing revenues for SACL over the five-year period. An alternative scenario might be for larger

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<sup>286</sup> Board of Airline Representatives of Australia, (1) op. cit., p. 94.



price increases now with prices subsequently driven down. In the case of privatised airports, for example, this was achieved through a CPI-X price cap.

The Commission modelled allowable revenues and prices over a five-year period, rather than the single period approach put forward by SACL. A five year period was chosen for the price smoothing exercise, as this time horizon is commonly used for regulatory purposes. For example, the price caps imposed on the Phase I and II privatised airports had a five year horizon prior to review. Similarly in the UK, five years is the duration of the price-caps set by the CAA for application to privatised airports. The Commission therefore considers that it would be appropriate for price of aeronautical services at Sydney Airport to be subject to further review at the end of five years following the introduction of the new charges. The modelled revenues under the Commission’s approach are set out in Table 11(c) below.

**Table 11(c): Allowable revenue (5 year estimation)**

	2000/01	2001/02	2002/03	2003/04	2004/05
‘Smoothed’ Allowable Revenue	\$160m	\$167m	\$175m	\$182m	\$191m

## 11.6 Conclusion

On the basis of the inputs specified in section 11.2 above, the Commission estimated an allowable revenue figure for 2000/01 of \$179m. After smoothing prices to allow for real cost savings and volume growth over the next five years, this allowable revenue falls to \$160m in 2000/01. This latter figure is reflected in the set of prices endorsed by the Commission.

Using the building block approach allowable revenue is calculated as follows:

**Table 11(d): Allowable revenue**

Allowable revenue 2000/01	SACL’s Proposal	Commission draft decision
Asset base (2000/01)	\$1,690.3m	\$1,438.9m
x WACC	x 7.7%	x 6.8%
= Return on capital	\$130.7m	\$98.0m
+ Return of capital (depreciation)	+ \$46.7m	+ \$38.1m
+ O&M costs	+ \$64.2m	+ \$56.4m
= Sub-total	\$241.6m	\$192.5m
+ Net taxation*	+ \$16.2m	+ \$8.6m
- Assumed capital gain on land**	- \$14.7m	\$0
- Contribution – aeronautical-related services	\$0	- \$22.6m
- Impact of Price Smoothing	\$0	- \$18.4m
<b>Total allowable revenue 2000/01</b>	<b>\$243.2m</b>	<b>\$160.1m</b>

\* SACL use a post-tax vanilla WACC in calculating their allowable revenue. This requires the explicit modelling of the cash flow associated with taxation, incorporating this into the calculation of the revenue target.

\*\*The capital gain on land represents a component of the real return to SACL that is not explicitly captured in the cash flows. Accordingly, allowable revenue is reduced by the capital gains over 2000/01.

## 11.7 Commission draft decision

The Commission's draft decision is to not object to the set of prices specified in Table 11(e) below. These prices are expected to generate revenues in line with the Commission's calculated allowable revenue figure of \$160m. Following the Commission's draft decision, SACL may wish to re-configure prices. The Commission would generally not object to a re-balance of prices, providing forecast revenues remain within the allowable levels determined by the Commission.

**Table 11(e): Aeronautical charges**

Charge	Unit	Price Levels	
		SACL Proposal	Commission Draft Decision
Runway	per 1000kg MTOW per movement	\$4.00	<b>\$3.07</b>
International Terminal	per passenger	\$9.50	<b>\$7.28</b>
Apron Parking	per 15 minute block	\$35.00	<b>\$35.00</b>
(Bussing/stand off discount)	per use of bus	(\$200.00)	<b>(\$200.00)</b>
Helicopter Movements	per movement	\$25.00	<b>\$25.00</b>
General Aviation Parking	per GA movement	\$60.00	<b>\$60.00</b>

## ■ Chapter 12: Structure of prices

SACL propose to restructure charges to more closely align pricing with the cost of providing services. The main changes proposed are:

- An increase the charge for runways, taxiways and the associated airfield relative to the international terminal charge. SACL propose to increase international terminal charges by approximately 74 per cent compared to a 175 per cent increase for the general landing charge.
- Introduction of a new apron use charge. This would introduce a time based charge for use of the aprons.
- Introduction of a bussing/stand off discount.
- A move from MTOW to passenger based charges for use of the international terminal.

SACL explains the rationale behind the proposed restructuring of changes as follows:

...it is likely that prices have provided inappropriate incentives to customers in the past which may have led to inefficient use of existing airport facilities, and investment in capacity which is less than fully utilised. For example, aircraft utilising an apron all day pay no more than aircraft that turn around in a minimal time. Also, the demand for runway and terminal usage peak times has resulted in the development of facilities that are under-utilised at other times. Prices do not currently signal the opportunity cost of this behaviour. There are therefore good reasons for the SACL to reform its pricing structure.<sup>287</sup>

Passenger numbers clearly have a closer relationship than aircraft weight to terminal costs. Likewise, a time-based measure is likely to best reflect the full costs (including opportunity cost) of apron parking. The proposed structure therefore better reflects the drivers of cost than the current aeronautical charging structure. Accordingly, the draft decision supports the proposed restructuring of prices, subject to adjustments to price levels as discussed in chapter 11. The proposals do not, however, fully address a number of concerns in relation to congestion management.

### 12.1 Managing congestion

SACL's proposals also flag the possibility of further changes in the future to introduce time based (peak / off peak) charges. SACL's proposal states:

Sydney Airport's runway system is nearing capacity during peak times of the day. Sydney Airport currently has a movement cap of 80 movements per hour and a slot management system to allocate capacity.

...While it may be argued that this (slot management) system involves elements of equity by protecting the position of incumbents, there is no incentive for an airline that has a degree of flexibility in scheduling a particular service or services to move so as to allow an airline with high demand to occupy that slot. This may also act as a barrier to entry.

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<sup>287</sup> Sydney Airports Corporation Ltd, (1) op. cit., p. 8-1.

...The auctioning of slots (as property rights) on a regular basis by the airport company is arguably the most efficient method of charging for runway use. The development of such a system is outside the control of the Sydney Airport as the Government legislated slot system would have to be amended.

...A proxy for ensuring that the users that value slots the highest receive them is to have charges that reflect the level of demand at certain times of the day. If the runway charge is equal to the slot value, there would not be a requirement for a slot market.

There are a number of issues that need to be addressed in detail before an equitable and efficient time based charging regime could be introduced. These include the impact on regional services, the relevant times, basis of charging and the appropriate level of charges. The requirement for time based charges is not currently acute as slots remain available at most hours and Department of Transport and Regional Services forecasts indicate that the issues will be critical by 2006-7. SACL's forecasts suggest existing capacity may be sufficient until 2009/10. Accordingly, detailed demand impact analysis will continue. Any future proposal would be the subject of a separate notification and detailed consultation process with all customers.<sup>288</sup>

Given emerging capacity constraints at peak periods the Commission supports the consultation process proposed by SACL and would be likely to support proposals for peak period charges. In this respect the FAC's decision to remove the peak and shoulder period surcharges that had existed for a number of years was disappointing.

Introduction of peak period charges could improve congestion management. In particular it could discourage airlines from holding more peak period slots than required by encouraging airlines to:

- move more flights to off peak times; and
- use peak period slots more intensely, by using larger aircraft during peak periods.

As SACL argues, peak period pricing should help to ensure that peak period slots are allocated to those users who value them most. This could also help to free up slots for new entrants. This is potentially a major issue since slot constraints could limit the expansion by Impulse Airlines and Virgin Blue and prevent or limit other airline entry. At the moment the incumbents have an incentive to maximise their peak period slot holdings to limit the threat of new entrants. In relation to the proposed new price structure, Impulse notes:

Impulse has no objections to the new price structure proposed by SACL and considers the increase to be reasonable. Impulse is also content with the decision to retain the existing charge for small and medium (15-19 seat) regional aircraft, such as Impulse's Beech 1900D.<sup>289</sup>

### **12.1.1 Regional Users**

Submissions were made by several interested parties with particular comments of the impact on regional users. The Regional Airlines Association of Australia (RAAA) made comments that the proposed increases in charges for Sydney Airport 'do not affect some Regional Airlines substantially and some not at all'.<sup>290</sup> However, the RAAA went on to say that:

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<sup>288</sup> Sydney Airports Corporation Ltd, (2) op. cit., p xix.

<sup>289</sup> Impulse Airlines, op. cit.

<sup>290</sup> Regional Airlines Association of Australia, *Public Discussion Forum – Sydney Airport Pricing Proposal*, November 2000.

For those airlines using aircraft such as the Saab 340B and Dash-8 and heavier, however, there is an increased impost of between 5% and 30% proposed and therefore the arguments contained in the BARA paper are of relevance.<sup>291</sup>

The Riverina Regional Organisation of Councils (RIVROC) states that it regards ‘the continuation of timely and affordable access to Kingsford Smith Airport for regional air travellers to be an issue of vital importance to the non-metropolitan residents of the State’.<sup>292</sup>

The Commission has comments made by the RAAA and RIVROC in conjunction with BARA’s arguments in the context of its broader assessment of SACL’s proposal.

A specific submission was made from the Overnight Airfreight Operators Association (OAOA) in relation to the runway charge for fixed wing powered and unpowered aircraft. OAOA suggests that runway charges during the curfew period should be less than the non-curfew rates as “from the freighter’s viewpoint Sydney is the most difficult and unreliable airport on the network – due solely to the statutory constraints”.<sup>293</sup> OAOA believes that,

...a notional discount of 30% on the finally negotiated runway charge would be some recognition of the overflight losses and the low aircraft utilization resulting from the Curfew Act requirements.<sup>294</sup>

The Commission makes no comment on this submission at present, but, notes that SACL proposes to consider pricing based on time of day usage at a later date.

## 12.2 Commission draft decision

The Commission’s draft decision is to not object to SACL’s proposed move from MTOW to passenger based charges for use of the international terminal, or the levying of an apron parking charge. The Commission encourages SACL to introduce appropriate peak period charges and supports the consultation process proposed by SACL.

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<sup>291</sup> Ibid.

<sup>292</sup> Riverina Regional Organisation of Councils, *Sydney Airport*, January 2001.

<sup>293</sup> Overnight Airfreight Operators Association, *OAOA’s Submission to ACCC on SACL’s Draft Pricing Proposal*, November 2000, p. 2.

<sup>294</sup> Ibid, p. 3.

## ■ Chapter 13: Draft decision

As noted earlier, this paper is a draft decision. The Commission encourages SACL and airport users affected by this draft decision to respond to this paper and address the preliminary conclusions it contains. The Commission will publish its final decision on the basis of responses to its preliminary conclusions.

The Commission's draft decision is to not object to the following table of aeronautical charges. The Commission recommends a review of aeronautical charges at Sydney Airport after five years following the introduction of the new charges.

**Table 13(a): Aeronautical charges**

<b>Charge</b>	<b>Unit</b>	<b>Commission Draft Decision</b>
Runway	per 1000kg MTOW per movement	<b>\$3.07</b>
International Terminal	per passenger	<b>\$7.28</b>
Apron Parking	per 15 minute block	<b>\$35.00</b>
(Bussing/stand off discount)	Per use of bus	<b>(\$200.00)</b>
Helicopter Movements	per movement	<b>\$25.00</b>
General Aviation Parking	per GA movement	<b>\$60.00</b>

The impact of these prices on consumers is discussed in Appendix B.

A comparison of these charges with charges at other airports in Australia and overseas is at Appendix C.

- **APPENDIXES**

- **APPENDIX A: Relevant legislative instruments**

**PRICES SURVEILLANCE ACT 1983**

**SECTION 17**

**Part III--Functions of the Commission Functions of the Commission under this Act**

- (1) The functions of the Commission are:
  - (a) to consider notices given to the Commission under paragraph 22(2)(a) and to take in relation to such notices such action in accordance with this Part as it considers appropriate; and
  - (b) to hold inquiries in accordance with this Part into matters relating to prices for the supply of goods or services (except the supply of goods or services by a State or Territory authority), and to report to the Minister the results of each such inquiry; and
  - (c) to monitor prices, costs and profits in any industry or business that the Minister directs the Commission to monitor, and to report to the Minister the results of the monitoring.
- (2) The Commission shall hold such inquiries as it is required to hold by instrument given by the Minister under section 18 and may, with the approval of the Minister under section 18, hold such other inquiries as it thinks fit.
- (3) In exercising its powers and performing its functions under this Act, the Commission shall, subject to any directions under section 20, have particular regard to:
  - (a) the need to maintain investment and employment, including the influence of profitability on investment and employment;
  - (b) the need to discourage a person who is in a position substantially to influence a market for goods or services from taking advantage of that power in setting prices; and
  - (c) the need to discourage cost increases arising from increases in wages and changes in conditions of employment inconsistent with principles established by relevant industrial tribunals.
- (4) Paragraphs 13(2)(b) and 14(2)(b) and section 17, of the "Trade Practices Act 1974" apply in relation to the disclosure of interests in matters before the Commission under this Act.

- (5) Subsections 8A(4) and (5) and sections 16, 18 and 19 of the "Trade Practices Act 1974" apply in relation to the Commission's powers and functions under this Act in the same way as they apply to the Commission's powers and functions under that Act.

## **SECTION 21**

### **Declarations by Minister or Commission**

- (1) The Minister, or the Commission with the approval of the Minister, may by instrument in writing published in the "Gazette":
- (a) declare goods or services of a specified description to be notified goods or services for the purposes of this Act;
  - (b) declare a person to be, in relation to goods or services of a specified description, a declared person for the purposes of this Act; or
  - (c) declare a supply of goods or services of a specified description, being a supply in a specified manner, of a specified kind or in specified circumstances, to be an exempt supply for the purposes of this Act.
- (1A) The Minister must not make or approve a declaration of a State or Territory authority unless:
- (a) the appropriate Minister of the State or Territory concerned has agreed to the declaration being made; or
  - (b) the National Competition Council has, on the request of an Australian government, recommended the declaration and the Minister has consulted the appropriate Minister of the State or Territory concerned.
- (1B) The National Competition Council must not recommend a declaration of a State or Territory authority in relation to goods or services unless the Council is satisfied that:
- (a) at least one Australian government has notified the State or Territory concerned that the Australian government is not satisfied that there is effective supervision of the prices charged by the authority for the supply of those goods or services; and
  - (b) there is not effective supervision of prices charged by the authority for the supply of those goods or services; and
  - (c) the supply of those goods or services by the authority has a significant direct or indirect impact on trade or commerce described in paragraph 4(1)(g) or trade and commerce between Australia and another place.
- (1C) The National Competition Council must not recommend a declaration of a State or Territory authority in relation to goods or services if:
- (a) at any time during the period of 5 years before the Council received the request mentioned in paragraph (1A)(b), the Council was satisfied (when considering a



previous request) that there was effective supervision of prices charged by the State or Territory authority for the supply of those goods or services; and

(b) the Council is satisfied that there has not been a substantial change in the mechanism for that supervision since the Council was satisfied as mentioned in paragraph (a).

(1D) In deciding whether there is effective supervision of prices charged by a State or Territory authority, where the State or Territory concerned is a party to the Competition Principles Agreement made on 11 April 1995 between the Commonwealth, New South Wales, Victoria, Queensland, Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory, the National Competition Council must apply the relevant principles set out in the agreement.

(1E) A declaration under paragraph (1)(b) must specify the time when it is to cease to have effect.

(2) The Minister, or the Commission with the approval of the Minister, may by instrument in writing published in the "Gazette" revoke or vary a declaration under subsection (1).

(3) A declaration under paragraph (1)(b) ceases to have effect at the time specified under subsection (1E), unless the declaration is revoked sooner.

(4) In this section: "Australian government" means the Commonwealth, a State, the Australian Capital Territory or the Northern Territory.

## **SECTION 22**

### **Notification to Commission of proposed increases in prices of goods or services**

(1) Subject to subsection (2), a person who is a declared person in relation to goods or services of a particular description, being notified goods or services, shall not supply goods or services of that description in a locality on particular terms and conditions:

(a) if the person has supplied goods or services of that description in that locality on the same or substantially similar terms and conditions in the past 12 months—at a price exceeding the highest price at which the person has supplied goods or services of that description in that locality on the same or substantially similar terms and conditions in that period;

(b) if the person has not supplied goods or services of that description in that locality on the same or substantially similar terms and conditions in the past 12 months, but has supplied goods or services of that description elsewhere in Australia on the same or substantially similar terms and conditions in that period—at a price exceeding the highest price at which the person has supplied goods or services of that description in Australia on the same or substantially similar terms and conditions in that period;  
or

- (c) if the person has not supplied goods or services of that description in Australia on the same or substantially similar terms and conditions in the past 12 months.

Penalty: \$10,000.

- (2) Subsection (1) does not prohibit a person from supplying goods or services of a particular description in a locality on particular terms and conditions (in this subsection referred to as the "relevant terms") at a particular price (in this subsection referred to as the "relevant price") if:
  - (a) the person has given to the Commission a notice in writing stating that the person proposes to supply goods or services of that description in that locality on specified terms and conditions (in this subsection referred to as the "proposed terms") at a specified price (in this subsection referred to as the "proposed price");
  - (b) the event or events referred to in one of the following subparagraphs has or have occurred:
    - (i) the prescribed period in relation to the notice referred to in paragraph (a) has expired;
    - (ii) the Commission has served notice in writing on the person stating that the Commission has no objection to the person supplying goods or services of that description in that locality on the proposed terms at the proposed price;
    - (iii) the Commission has served a notice in writing on the person stating that the Commission would have no objection to the person supplying goods or services of that description in that locality on the proposed terms at a specified price, being a price that is lower than the proposed price, and the person has, not later than 7 days after service on the person of the notice by the Commission, given to the Commission a further notice stating that the person proposes to supply goods or services of that description in that locality on the proposed terms at a price not exceeding the price specified in the notice by the Commission;
  - (c) the relevant terms are the same as, or substantially similar to, the proposed terms; and
  - (d) the relevant price does not exceed:
    - (i) in a case to which subparagraph (ii) does not apply—the proposed price; or
    - (ii) if both of the events referred to in subparagraph (b)(iii) have occurred—the price specified in the notice first referred to in that subparagraph.
- (3) Subsection (1) does not apply in relation to a supply of goods or services of a particular description that is an exempt supply in relation to goods or services of that description.
- (4) Where a person has given a notice to the Commission under paragraph (2)(a) (in this subsection referred to as the "original notice") specifying a price:

- (a) the person may (whether or not he or she has previously given to the Commission a notice under this subsection in relation to the original notice) give to the Commission a further notice stating that the original notice is to have effect as if there were substituted for the price specified in the original notice such price (being a price lower than the price specified in the original notice and lower than the price specified in any previous notice under this subsection in relation to the original notice) as is specified in the further notice; and
- (b) if a further notice is so given by the person, the original notice has effect accordingly.
- (5) For the purposes of this section, the prescribed period in relation to a notice given to the Commission under paragraph (2)(a) is, subject to subsections (6) and (7), the period of 21 days commencing on the day on which the notice was so given.
- (6) The Commission may, with the consent of a person who has given a notice to the Commission under paragraph (2)(a), determine, before the expiration of the period of 21 days referred to in subsection (5), that the prescribed period in relation to the notice for the purposes of this section shall be a specified longer period and, in that case, a reference to that longer period shall, for the purposes of the application of that subsection in relation to the notice, be deemed to be substituted in that subsection for the reference to the period of 21 days.
- (7) Where the Commission has served a notice on a person under subparagraph (2)(b)(iii) in relation to a notice given by the person to the Commission under paragraph (2)(a) then, for the purposes of the application of subsection (5) in relation to the second-mentioned notice, the reference in that subsection to the period of 21 days, or, if a reference to a longer period is to be deemed, by virtue of subsection (6), to be substituted in subsection (5), the reference to that longer period, shall be deemed to be a reference to the period of 21 days, or to that longer period, as the case may be, increased by a further period of 14 days.

# COMMONWEALTH OF AUSTRALIA

## *Prices Surveillance Act 1983*

### DECLARATION NO 89

I, Joe Hockey, Minister for Financial Services and Regulation, pursuant to sub-section 21 (1) of the *Prices Surveillance Act 1983* ('the Act'), hereby declare:

(1) subject to paragraph (3), the provision of aeronautical services, limited to:

- (a) aircraft movement facilities and activities; and
- (b) passenger processing facilities and activities

to be notified services for the purposes of the Act;

(2) the following to be a declared person for the purposes of the Act:

Sydney Airports Corporation Ltd in relation to the provision of the services referred to in paragraph (1) at Sydney (Kingsford Smith) Airport.

(3) The notified services referred to in paragraph (1) do not include provision of the following:

- (a) aircraft refuelling;
- (b) maintenance sites and buildings;
- (c) freight equipment storage sites;
- (d) freight facility sites and buildings;
- (e) ground support equipment sites;
- (f) check-in counters and related facilities; or
- (g) public and staff car parks.

*Note: Services provided in relation to these facilities are subject to prices monitoring under section 27A of the Act.*

(4) In this declaration:

(a) **'aircraft movement facilities and activities'** means any of the following:

- (i) airside grounds, runways, taxiways and aprons;
- (ii) airfield lighting, airside roads and airside lighting;
- (iii) airside safety;
- (iv) nose-in guidance;
- (v) aircraft parking;
- (vi) visual navigation aids;

(b) **'passenger processing facilities and activities'** means any of the following:

- (i) forward airline support area services;
- (ii) aerobridges and airside buses;
- (iii) departure lounges and holding lounges (but excluding commercially important persons lounges);
- (iv) immigration and customs service areas;
- (v) public address systems, closed circuit surveillance systems and security systems;
- (vi) baggage make-up, handling and reclaim;
- (vii) public areas in terminals, public amenities and public lifts, escalators and moving walkways;
- (viii) flight information display systems;
- (ix) landside roads, landside lighting, and covered walkways.

(5) The facilities and activities referred to in subparagraphs 4(a) and 4(b) do not include, in relation to an airport, the provision of a service which, on the date the airport lease was granted, was the subject of a contract, lease, license, or authority given under the common seal of the Federal Airports Corporation.

*Note: This exclusion extends to a contract, lease, licence, or authority exercised under an option in a contract, lease, licence or authority given under the common seal of the Federal Airports Corporation.*

(6) This declaration commences on 1 July 2000 and ceases on 1 July 2003.

JOE HOCKEY

June 2000

# COMMONWEALTH OF AUSTRALIA

## *Prices Surveillance Act 1983*

### DIRECTION NO 18

I, Joe Hockey, Minister for Financial Services and Regulation, pursuant to section 20 of the *Prices Surveillance Act 1983*, hereby direct the Australian Competition and Consumer Commission (Commission), in exercising its powers and performing its functions under the Act in relation to the pricing of aeronautical services at Sydney (Kingsford Smith) Airport, to give special consideration to the following matters:

(1) Quality of service information obtained under Part 8 of the *Airports Act 1996* may be taken into account by the Commission in considering notifications to increase prices for declared services. In reporting on the quality of service indicators, the Commission will focus on the facilities and services provided by, or which could be influenced by, the airport operator.

The Commission is to use the following criteria to guide its assessment of proposals to increase charges for declared services as a result of necessary new investment:

- (a) the operator's plans for new investment or service innovation and the associated costs;
- (b) the relationship between the proposed increases in aeronautical charges and the costs (including the level of rate of return) of the new investment or service;
- (c) support from airport users with a significant interest in the investment for the operator's proposals, including in relation to charging changes;
- (d) contribution of the new investment/service to productivity improvements at the airport;
- (e) overall efficiency of the airport's operation;
- (f) the particular demand management characteristics of individual airports, including any demand management schemes in place, capacity constraints and any under-utilisation of airport infrastructure;
- (g) airport performance against quality of service measures, including services not directly under the control of the airport operator;
- (h) airport performance *vis-à-vis* other Australian airports and any comparable international airports; and
- (i) the extent to which the proposed investment will facilitate the operations of new entrants to domestic or international aviation.

While the Commission must take the above into account in deciding whether to approve a proposal to increase charges, in relation to new investment, each proposal will be considered on its merits having regard to the information available to the Commission. The weight provided by the Commission to each of the criteria may vary on a case-by-case basis.

The Commission will provide a statement of reasons for its determination.

This Direction takes effect from 1 July 2000 and replaces Direction No 15.

JOE HOCKEY

30 June 2000

# COMMONWEALTH OF AUSTRALIA

## *Prices Surveillance Act 1983*

### **DIRECTION NO 21**

I, Joe Hockey, Minister for Financial Services and Regulation, pursuant to section 27A of the Prices Surveillance Act 1983, hereby direct:

(1) the ACCC to undertake formal monitoring of the prices, costs and profits related to the supply of aeronautical related services by the following persons:

- (a) Adelaide Airport Ltd (Adelaide Airport);
- (b) Alice Springs Airport Pty Ltd (Alice Springs Airport);
- (c) Brisbane Airport Corporation Ltd (Brisbane Airport);
- (d) Canberra International Airport Pty Ltd (Canberra Airport);
- (e) Queensland Airports Ltd (Coolangatta Airport);
- (f) Top End Airport Pty Ltd (Darwin Airport);
- (g) Hobart International Airport Pty Ltd (Hobart Airport);
- (h) Australian Pacific Airports (Launceston) Pty Ltd (Launceston Airport);
- (i) Australian Pacific Airports Melbourne Ltd (Melbourne Airport);
- (j) Westralia Airports Corporation Pty Ltd (Perth Airport);
- (k) Sydney Airports Corporation Ltd (Kingsford Smith Airport); and
- (l) Australian Airports (Townsville) Pty Ltd (Townsville Airport).

(2) In this direction, 'aeronautical related services' means the provision, by an airport operator company, of any of the following:

- (a) aircraft refuelling;
- (b) aircraft maintenance sites and buildings;
- (c) freight equipment storage sites;
- (d) freight facility sites and buildings;
- (e) ground support equipment sites;
- (f) check-in counters and related facilities;
- (g) car parks (including public and staff parking but not valet parking).



(3) The ACCC is to report to me on its monitoring activities in paragraph (1) following the end of each financial year.

(4) This Direction replaces Direction No 19.

JOE HOCKEY

October 2000

# COMMONWEALTH OF AUSTRALIA

## *Prices Surveillance Act 1983*

### **DIRECTION**

I, the Treasurer, in pursuance of section 20 of the Prices Surveillance Act 1983, hereby direct the Prices Surveillance Authority to give special consideration, in exercising its powers and performing its functions under that Act, to the following matter in addition to the matters in paragraphs (a), (b) and (c) of sub-section 17(3) of that Act:

the Government's policy of generally not supporting price increases in excess of movements in unit costs.

Dated this 15<sup>th</sup> day of October 1985

P. J. KEATING

## ■ APPENDIX B: Impact on Consumers

The pricing proposal under consideration deals with charges to be levied directly on users of the airport, those being primarily airlines. These users however represent one stage in the chain of production of services that are ultimately demanded by consumers. Therefore, as in all industries, pricing changes at one stage of production flow through, in varying degrees, to the ultimate stage.

Accordingly, the Commission has undertaken an assessment of what the expected impact of these price changes is foreshadowed to be on the average consumer of airline services. To measure this impact, the price change across a range of airline ticket fares expected to flow from the change in aeronautical charges was calculated. While not directly relevant to the Commission's consideration of SACL's proposal, the assessment serves to indicate the potential impact on final consumers of the price increases arising from the Commission's draft decision.

The methodology of determining these price changes involved calculating the increased costs to airlines of aeronautical charges incurred on particular routes, taking into account the weight, capacity, and load factor of the aircraft. These increases were then translated into a per passenger basis, and then compared against ticket prices. Two types of ticket prices were used in the assessment – discounted fares and full economy fares.

Table B below illustrates the impact of these charges on final consumers. It can be observed that, in general, the increase in fares is minimal. The largest dollar increase in fares is expected to be on a Sydney – Wellington return ticket at \$12.52. In percentage terms, the largest increase is on the same route, at around 3.1 per cent.

**Table B: Impact on fares**

<b>Route: Sydney to ...</b>	<b>Aircraft</b>	<b>Dollar increase in fare</b>	<b>Percentage increase in fare – discount fare<sup>a</sup></b>	<b>Percentage increase in fare – full economy fare<sup>b</sup></b>
<b>International</b>				
London – Return Airfare	B744 - Boeing 747-400	\$9.96	0.6%	0.4%
London – Return Airfare	B742 - Boeing 747-200	\$10.48	0.6%	0.4%
London – Return Airfare	B743 - Boeing 747-300	\$10.48	0.6%	0.4%
London – Return Airfare	B74A - Boeing 747- 1/2/300	\$10.48	0.6%	0.4%
London – Return Airfare	B74S - Boeing 747SP	\$10.42	0.6%	0.4%

<sup>a</sup> Source: Estimates of return discount airfares based on market enquiries.

<sup>b</sup> Source: SACL's estimate of full economy fares.

London – Return Airfare	B773 - Boeing 777-300	\$11.92	0.7%	0.5%
Singapore - Return Airfare	A340 - Airbus A340	\$10.31	1.4%	0.8%
Singapore - Return Airfare	B772 - Boeing 777-200	\$11.77	1.6%	0.9%
Singapore - Return Airfare	A330 - Airbus A330	\$12.04	1.6%	1.0%
Auckland - Return Airfare	B763 - Boeing 767-300	\$10.93	2.7%	0.9%
Auckland - Return Airfare	A306 - Airbus A300-600	\$11.81	3.0%	1.0%
Auckland - Return Airfare	A300 - Airbus A300	\$11.76	2.9%	1.0%
Auckland - Return Airfare	B762 - Boeing 767-200	\$11.81	3.0%	1.0%
Auckland - Return Airfare	B734 - Boeing 737-400	\$11.94	3.0%	1.0%
Wellington - Return Airfare	B733 - Boeing 737-300	\$11.79	2.9%	1.0%
Wellington - Return Airfare	B732 - Boeing 737-200	\$12.52	3.1%	1.1%
<b>Domestic</b>				
Perth - Return Airfare	B762 - Boeing 767-200	\$3.29	0.5%	0.2%
Melbourne - Return Airfare	B734 - Boeing 737-400	\$2.43	1.2%	0.4%
Melbourne - Return Airfare	A320 - Airbus A320	\$2.09	1.0%	0.4%
Melbourne - Return Airfare	B733 - Boeing 737-300	\$2.66	1.3%	0.5%
Melbourne - Return Airfare	B732 - Boeing 737-200	\$2.10	1.0%	0.4%
Melbourne - Return Airfare	B717 – Boeing 717	\$2.20	1.1%	0.4%
<b>Regional</b>				
Dubbo - Return Airfare	DHC8 - De Haviland DH8	\$0.67	0.7%	0.3%
Dubbo - Return Airfare	DH8 - De Haviland DHC-8	No increase		
Dubbo - Return Airfare	SF34 - SAAB 340 A-A	No increase		
Dubbo - Return Airfare	B190 - Beech 1900D	No increase		
Newcastle - Return	BE02 - Beech 1900C	No increase		

Airfare	BE02			
Newcastle - Return Airfare	BA31 - Britaero 3100	No increase		
Newcastle - Return Airfare	DH6 - De Haviland DHC6	No increase		
Newcastle - Return Airfare	DHC6 - De Haviland Twin Otter 300	No increase		
Newcastle - Return Airfare	CRJ2 - Canadair Regional Jet 200ER	\$1.41	1.4%	0.6%
Singleton - Return Airfare	PA31 – Piper PA31-350	No increase		

## ■ APPENDIX C: International Comparisons

### International comparisons

#### SACL proposal

SACL submits that its proposed new charges bear favourable comparison with airport charges at international airports around the world. SACL commissioned Transport Research Laboratory (TRL) to report on airport charges prevailing at a number of international airports.<sup>295</sup> According to the report, SACL's existing charges are well below the international average, and are amongst the bottom six airports in the survey. SACL's proposed new charges are close to the survey average.

#### Views of interested parties

Whilst BARA did not provide direct comments on SACL's use of international comparisons of airport charges, it did however generally express circumspection when making comparisons between Australian and international airports:

Although benchmarking can provide useful information in assessing the performance of airports, its value depends on the similarities of the airports compared and the extent to which differences in the airports are likely to drive differences in costs.<sup>296</sup>

BARA preferred to focus on comparisons between Australian airports, due to their closer comparability on a range of aspects. BARA stated in the Public Discussion Forum in Melbourne that,

Australia is quite unique, especially given the fact that the airlines actually provide the domestic terminal services. So there is big differences across what an airport actually provides in Australia and what an airport provides in other countries.<sup>297</sup>

Melbourne Airport endorses the use of TRL data for the purpose of comparing airport charges, and highlights the usefulness of international comparisons generally.

#### Commission assessment

Whilst the parity of SACL's charges with those of airports worldwide is of interest to the Commission and various parties to the process, it should be noted that it was not a factor in the Commission's consideration of SACL's proposal or ultimately in the draft decision. As covered in detail in the body of the draft decision, the assessment of SACL's proposal was made on its own merits within a cost-based framework.

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<sup>295</sup> Transport Research Laboratory, *A review of aeronautical charges at Sydney Airport - in a world and regional context, Final Report*, October 1999.

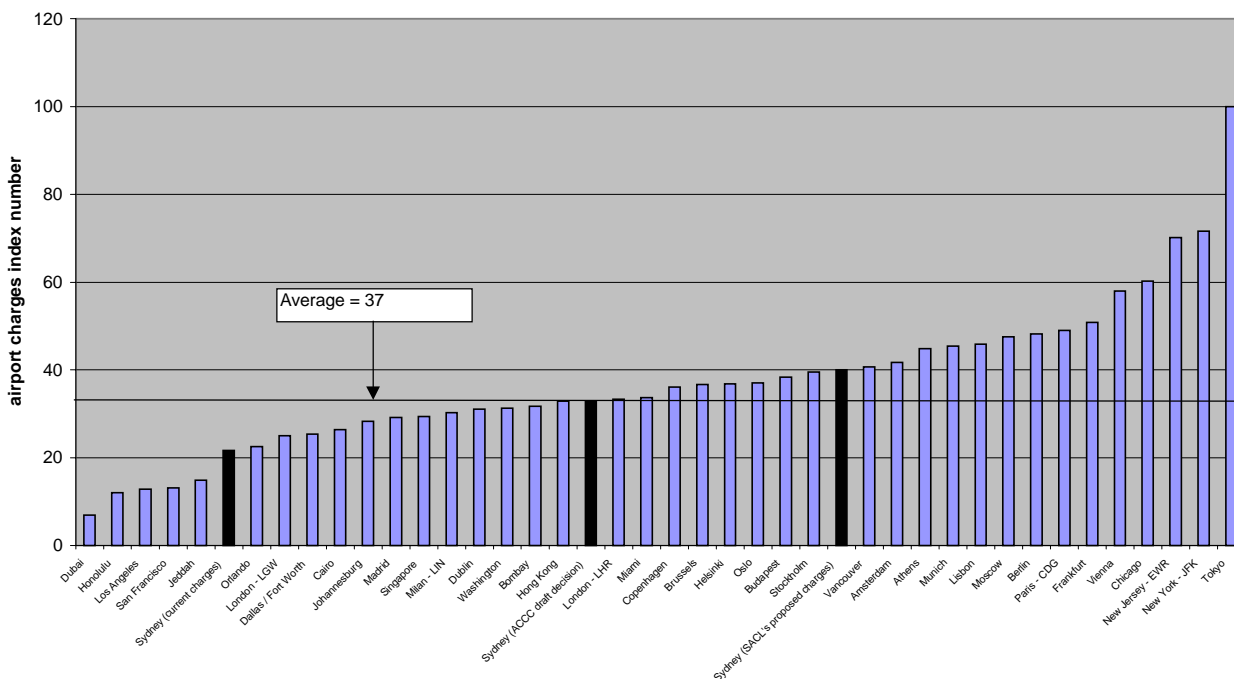
<sup>296</sup> BARA submission, sec 18.6.1, p. 163.

<sup>297</sup> G Woodbridge, Transcript of Proceedings, *Australian Competition and Consumer Commission, Sydney Airport Public Discussion Forum*, 13 December 2000, p. 24.

Nonetheless, in considering the implications of its draft decision, the Commission made use of both SACL’s submitted comparison of international charges, and of an additional report the Commission purchased from TRL. It should be noted that the TRL reports make an adjustment for different currencies to enable ready comparison of charges.

Chart C1 illustrates TRL’s international comparison of airport charges, augmented by the addition of SACL’s proposed charges and of the charges approved in the draft decision. Note that the latter are still below the average charges of those airports surveyed.

**Chart C1: International Airport Charges Index 1999**



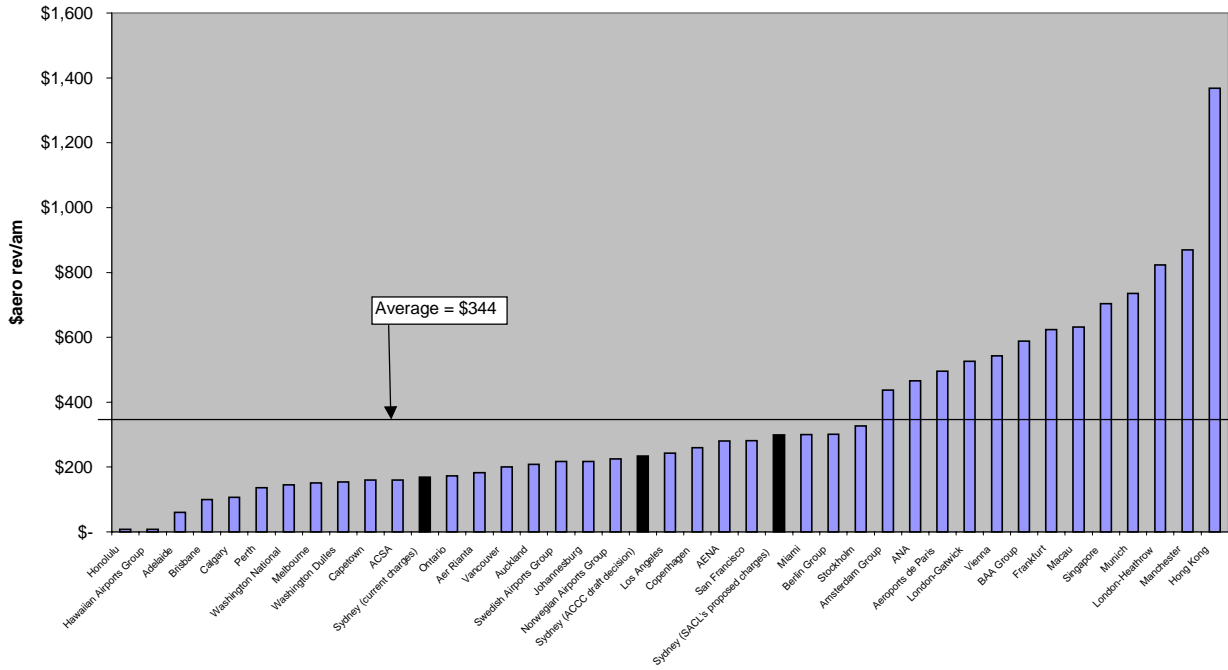
The Commission obtained TRL’s 2000 edition of “Airport Performance Indicators” in order to enable further comparison.<sup>298</sup> This allowed a broader comparison as the airport sample was larger than that provided by SACL.

Two bases for comparison were employed – aeronautical revenue per aircraft movement, and aeronautical revenue per passenger. Charts C2 and C3 respectively illustrate these two comparisons.

It can be observed that under both measures, Sydney airport’s existing, proposed and draft approved charges are below the international average.

<sup>298</sup> Transport Research Laboratory, *Airport Performance Indicators 2000*, August 2000.

**Chart C2: Aeronautical Revenue per Aircraft Movement**



**Chart C3: Aeronautical Revenue per Passenger**

