



SYDNEY AIRPORTS CORPORATION LTD.

Aeronautical Pricing Proposal

Decision

May 2001

Contents

▪ Glossary.....	5
▪ Executive summary.....	7
▪ Chapter 1: Introduction.....	26
1.1 Commission assessment process.....	26
1.2 Past notifications at Sydney Airport	29
1.3 SACL’s proposal.....	29
1.4 Summary of submissions.....	34
▪ Chapter 2: The regulatory framework	38
2.1 The regulatory framework applicable to the SACL proposal	38
2.2 Application of the regulatory framework to Sydney Airport	50
▪ Chapter 3: Methodology - the building block approach.....	56
3.1 Introduction	56
3.2 Consistency of the building block methodology with the regulatory framework applicable to Sydney Airport	57
3.3 Application of the building block approach to Sydney Airport	64
3.4 Commission decision.....	66
▪ Chapter 4: The dual till methodology.....	68
4.1 Introduction	68
4.2 SACL’s proposal.....	68
4.3 Legislative framework	70
4.4 Economic analysis	75
4.5 Conclusion.....	84
▪ Chapter 5: Application of the dual till methodology	86
5.1 The aeronautical / non-aeronautical distinction.....	86
5.2 Direction No. 22.....	93
5.3 Conclusion.....	95

▪ Chapter 6: Asset base – assets other than land	98
6.1 Introduction	98
6.2 SACL Proposal.....	98
6.3 Views of interested parties.....	99
6.4 Consultants’ views	102
6.5 Discussion.....	102
6.6 Commission assessment	114
6.7 Commission decision.....	115
▪ Chapter 7: The Necessary New Investment Criteria Under Direction No. 18...	116
7.1 Introduction	116
7.2 The legal framework.....	117
7.3 Commission assessment	119
7.4 Commission decision.....	130
▪ Chapter 8: Land Valuation	132
8.1 Introduction	132
8.2 SACL’s Proposal	132
8.3 Opportunity Cost.....	133
8.4 Historic Cost.....	141
8.5 Land Value and Congestion.....	146
8.6 Commission decision.....	150
▪ Chapter 9: Allocation of capital costs (assets)	152
9.1 Introduction	152
9.2 SACL’s approach.....	152
9.3 Views of interested parties.....	155
9.4 Commission assessment and decision.....	157
▪ Chapter 10: Operating Expenditure	160
10.1 Introduction	160
10.2 SACL’s Proposal	160
10.3 Views of Interested Parties.....	161

10.4 Discussion.....	162
10.5 Commission decision.....	169
▪ Chapter 11: Weighted average cost of capital (WACC).....	170
11.1 Introduction	170
11.2 WACC formulation.....	170
11.3 Risk-free rate.....	172
11.4 Inflation.....	175
11.5 Cost of Debt.....	176
11.6 Cost of equity	178
11.7 Capital Structure.....	194
11.8 Taxation.....	196
11.9 Imputation factor.....	196
11.10 Commission decision.....	199
▪ Chapter 12: Financial modelling	201
12.1 Introduction	201
12.2 Building block approach.....	201
12.3 Traffic forecasts	201
12.4 Price path	202
12.5 Conclusion.....	203
12.6 Commission decision.....	205
Chapter 13: Structure of prices	207
13.1 Managing congestion.....	207
13.2 Commission decision.....	209
▪ Chapter 14: Commission decision.....	211
▪ APPENDIXES	213
▪ APPENDIX A: Relevant legislative instruments	213
▪ APPENDIX B: Dual till: methodology of the draft decision.....	227
▪ APPENDIX C: Impact on Consumers	231

▪ APPENDIX D: International Comparisons	235
▪ Bibliography	239

▪ 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)
Commission	Australian Competition and Consumer Commission
CPI	Consumer Price Index
CTFR	Counter terrorist first response
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
FIDS	Flight Information Display System
GCAL	Gold Coast Airport Ltd
GDP	Gross Domestic Product
IATA	International Air Transport Association
IPART	Independent Pricing and Regulatory Tribunal
LFA	Leigh Fisher Associates
MRP	Market Risk Premium
MTOW	Maximum Take Off Weight
NECG	Network Economics Consulting Group
NERA	National Economic Research Associates
NNI	Necessary new investment
NPV	Net Present Value

NSWSCC	New South Wales State Chamber of Commerce
NTA	Northern Territory Airports Pty Ltd
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
RTAs	Runways, taxiways and aprons
SACL	Sydney Airports Corporation Ltd
TFI	Tourism Futures International
TPA	<i>Trade Practices Act (Cth) 1974</i>
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* to the Australian Competition and Consumer Commission (the Commission) to increase certain aeronautical charges at Sydney (Kingsford Smith) Airport (Sydney Airport). SACL sought an increase of around 130 per cent.

The proposal relates to aeronautical charges which 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 Commission's decision is to object to the increase proposed, but not object to a lower increase. The decision will increase SACL's aeronautical revenue in 2000/01 from around \$93 million to around \$183 million, an increase of \$90 million or 97 per cent. This is approximately 76 per cent of the increase sought by SACL.

The higher charges will be levied on airlines and helicopter operators. If passed on to airline passengers, the increases will add around \$3.00 to a domestic return flight from Sydney Airport and around \$14.00 to an international return flight from Sydney Airport.

The decision approves a substantial part of the increases sought by SACL. The Commission considers that the increases are required to give SACL a reasonable return on its investments and to compensate SACL for major new investments undertaken in the lead up to the Olympics.

Nevertheless the decision has not approved all of the increases sought. This is because the Commission has concerns about a number of aspects of the proposal. The Commission considers that the land valuation proposed is too high and that SACL's proposals do not take into account likely reductions in operating and maintenance expenditures.

The decision addresses these issues by making two main changes to SACL's proposals. The first is to use an inflation-adjusted historic cost valuation of land as recommended by independent consultants.

The second change is to model costs and revenues over a five-year period instead of the one-year period used by SACL. The modelling factors in growth in traffic volumes and reductions in operating and maintenance costs.

One of the reasons given by SACL in support of the large price increases, and in particular the high land valuation adopted, was that the higher prices would help to address congestion problems at the airport. However, the Commission considers that SACL has not demonstrated how the proposals would address the problem. It considers that congestion needs to be addressed through restructuring of prices as well as price increases. It has concluded that the revenue levels implicit in this decision should be sufficient to address any congestion issues that arise over the next five to ten years when combined with appropriate price restructuring.

The price increase approved is somewhat higher than the 79 per cent increase adopted in the draft decision. This reflects adjustments to traffic volume forecasts, operating and maintenance costs,

asset valuations and depreciation. It also reflects changes in the Commission's application of the dual till methodology in response to Direction No. 22, issued since the draft decision was made.

The Commission has some reservations about SACL's application of the methodology. The draft decision took SACL's financial performance in providing aeronautical-related services into account. The rationale for taking this approach was that the resulting aeronautical prices would yield better economic efficiency outcomes and more effectively constrain market power than SACL's proposals. The aeronautical-related services taken into account are already subject to prices monitoring under the existing regulatory framework.

In this decision the Commission moves away from this position. It adopts SACL's application of the dual till and does not take the financial performance of aeronautical-related services into account in making its decision.

The move from the position adopted in the draft decision was taken after the Minister for Financial Services and Regulation issued a new direction on April 19 2001 (Direction No. 22) pursuant to section 20 of the Prices Surveillance Act 1983.

Implementation of the policy intent results in higher price increases than proposed by the Commission in its draft decision. The revised approach to the dual till adds around \$15 million per annum to SACL's revenues.

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 decision on SACL's 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. On 9 February 2001 the Commission released a draft decision seeking further submissions by 5 March 2001. It received a further 12 submissions. In April, the Minister issued Direction No 22. The Commission sought, and received, an extension of time from SACL in order to seek further comment on this matter.

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 web site at <<http://www.accc.gov.au>>.

SACL's proposal

SACL proposed substantial price increases. The main price changes are summarised in the following table. 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 ¹	\$2.92 per 1000kg MTOW	\$8.00 ² per 1000kg MTOW	175%
International Terminal Charge	\$7.92 per 1000kg MTOW (14.59)	\$19.00 ² per passenger	71% ³
Apron Use Charge	Remote stands only, \$350 per day	\$35.00 per 15 minutes or part thereof – 6am to 11pm	NA ⁴
(Bussing/Stand Off Discount) ⁵	NA	(\$200.00 per use)	NA
Helicopter Charges	\$2.92 per 1000kg MTOW	\$50.00 ² per movement	+ 1047% ⁶
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) - \$20.00 per movement (GST excl), \$22.00 (GST incl);
- Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement (GST excl), \$45.37 (GST incl); and
- All other aircraft - \$50.00 per movement (GST excl), \$55.00 (GST incl).

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 helicopter 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 (i.e. depreciation allowance) and

operating and maintenance expenditure. SACL's proposal uses projected 2000-01 costs as the basis for estimating allowable revenue.

The proposed revenue is divided by traffic volumes to give the proposed prices. In its proposal SACL used traffic forecasts developed by Tourism Futures International (TFI) in March 2000. After the Commission released its draft decision SACL provided updated traffic volume forecasts. The updated forecasts were developed by TFI in March 2001. They factor in actual traffic volumes up to December 2000, and are higher than originally projected, primarily because of the impact of the new domestic entrants.

Using the building block approach SACL estimates a maximum allowable revenue of \$243 million. The prices proposed by SACL would generate \$211 million in revenue in 2000/01¹ - within its estimate of the allowable revenue.

An overview of SACL's approach is provided in chapter 1 of this decision, with further details in the discussion about each element of the building block approach in chapters 4-11.

Submissions

The Commission received 15 submissions in response to its issues paper and a further 12 submissions in response to its draft decision. Following the issue of Direction No. 22 by the Minister, the Commission received a further 7 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.

SACL provided a submission in response to the Commission's draft decision. A number of the privatised airports, Brisbane, Perth, Melbourne, Canberra, Coolangatta and Northern Territory Airports also provided submissions.

Other submissions were received from the Overnight Airfreight Operators Association, Impulse Airlines, Virgin Blue 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. The submissions are available from the Commission's web site at <<http://www.accc.gov.au>>.

BARA's submissions are highly critical of SACL's approach. They argue 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

¹ This estimate is based on the March 2001 forecasts developed by Tourism Futures International.

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 Qantas Airways, British Airways and the International Air Transport Association supported this position.

In a further submission commenting on Direction No. 22, BARA makes three main points, arguing that:

- Direction No. 22 gives rise to inconsistencies among the legal instruments under which the Commission must assess SACL's proposal;
- Direction No. 22 may be *ultra vires*; and
- the Commission should reconsider other aspects of its decision should it adopt the dual till approach as proposed by SACL.

Similar points were put forward by IATA, who also request the Commission to re-visit certain elements of its decision.

SACL's submission is critical of the Commission's draft decision. The main concerns relate to the historic cost of land used and the application of the dual till approach to pricing. In relation to the dual till SACL argues that the approach is inconsistent with the Government's policy intent and the legal framework. SACL re-iterated this latter view following the issue of Direction No. 22 by the Minister.

SACL's submission proposes a "compromise" approach to the dual till to address the Commission's concerns. The compromise proposed is for prices in year 1 that result in revenue of \$20m less than the calculated (smoothed) allowable revenue from declared services that would otherwise apply and a further price adjustment from year 2 at the full (smoothed) level. This would give revenues of around \$182 million in 2000/01 rising to around \$210 million in 2001/02.

The submissions from the private airport operators generally support SACL's proposal and Direction No. 22, but criticise the Commission's draft decision. Their concerns focus on the impact of the decision on investment incentives. A summary of these and the other submissions is provided in chapter 1.

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”.²
- *Direction No. 22.* This direction was issued by the Minister on April 19th, 2001. The direction states that ‘in assessing prices for aeronautical services, the Commission should not take into account the revenues generated, or costs incurred, in the provision of services other than aeronautical services’.

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.

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 as far as possible achieved in its assessment of SACL’s aeronautical pricing proposal.

² Copies of relevant sections of the PS Act and Minister’s Directions and Declaration are contained in Appendix A.

These 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. It should be noted, though, that Direction No. 22 may have the effect of limiting the extent to which the Commission's consideration of SACL's proposals is able to reflect the above principles.

Chapter 2 explains how the objectives have been derived from the regulatory framework and why they are consistent with it.

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

Dual till

Until recently the single till approach to pricing aeronautical services was used to regulate airports in Australia and overseas. 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 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.

The single till approach has certain features that account for its widespread use. It ensures that airport operators earn a reasonable return on total assets, while preventing them from exploiting their market power. It is also practical to apply, as airport operators are free to recover costs through any charging structure they deem suitable. Furthermore, cost allocation issues do not arise using this approach.

However, the single till approach has disadvantages in terms of economic efficiency and in particular incentives for new investment.

The 'dual till' approach to pricing aeronautical services addresses many of these limitations. Its advantages are now widely recognised. In Australia the Government favours a dual till approach in the regulatory framework covering privatised airports and Sydney Airport. In the United Kingdom the review of airport regulatory arrangements being conducted by the Civil Aviation Authority (CAA) appears to favour a dual till approach, but has raised questions about the boundary of the till and the transition from dual till to single till.

The Commission's decision supports SACL's use of the dual till methodology. However, it has reservations about SACL's application of the methodology.

In its draft decision the Commission took SACL's financial performance in providing "aeronautical-related" services into account. The rationale for taking this approach was that the resulting

aeronautical prices would yield better economic efficiency outcomes and more effectively constrain market power than SACL's proposals. The aeronautical-related services taken into account included aircraft refuelling, check-in counters and car parks. They are already subject to prices monitoring under the existing regulatory framework.

The Commission's final decision moves away from this position. It adopts SACL's application of the dual till and does not take the financial performance of aeronautical-related services into account in making its decision.

The move from the position adopted in the draft decision was taken after the Minister for Financial Services and Regulation issued a new direction on April 19 2001 (Direction No. 22) pursuant to section 20 of the Prices Surveillance Act 1983.

Such directions do not bind the Commission to taking a particular approach. However, the Commission must give them special consideration in making its decisions. In this case the Commission considers that the direction warrants a departure from the approach taken in the draft decision.

It should be noted that previous price notifications relating to Sydney Airport have adopted a single till approach. Until now the Government has not clearly stated its position on the dual till or the boundary of the till. Direction No. 22 clarifies the Government's policy intent in relation to this issue. In effect the Government's policy intent is to apply the dual till approach on a narrower basis than proposed by the Commission in its draft decision. In practical terms this means that aeronautical-related services and in particular car parks (where the Commission identified an issue of market power) should not be taken into consideration in setting aeronautical charges at Sydney Airport.

Implementation of the policy intent results in higher price increases than proposed by the Commission in its draft decision. The revised approach to the dual till adds around \$15 million per annum to SACL's revenues.

The Commission's decision is to not object to the dual till methodology as proposed by SACL.
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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.³ 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.

The approach adopted in this decision generally supports the principle of using opportunity cost, but questions SACL's application of the concept. The 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

³ Includes landfill costs.

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 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 decision 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 generally more readily identifiable 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.⁴

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 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.⁵

⁴ Australian Competition and Consumer Commission, May 1999a, *Draft Statement of Principles for the Regulation of Transmission Revenues*, p. 41-42. Available on the Commission's website at <<http://www.accc.gov.au>> by following the 'electricity' hot-link.

⁵ Australian Competition and Consumer Commission, January 2000b, *Decision on NSW and ACT Transmission Network Revenue Caps, 1999/00-2003/04*. Available on the Commission's website at <<http://www.accc.gov.au>> by following the 'electricity' hot-link.

In comparing the merits of historic cost and SACL's proposed approach, this 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.

One of the arguments put forward by SACL for the land valuation proposed is that higher prices are necessary to address congestion problems at the airport. Chapter 8 evaluates this argument. It concludes that adjustments to price levels without adjustments to the existing price structure are unlikely to have a significant impact on congestion, 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.

The Commission does not consider that SACL has demonstrated how its proposals will significantly improve congestion management. The Commission accepts that price structure needs to be considered in conjunction with price levels. 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 price restructuring. The revenue levels implicit in this decision should be sufficient to address any congestion issues that arise over the next five to ten years when combined with appropriate price restructuring.

The Commission's 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 \$453 million, compared to \$705 million proposed by SACL.⁶

Valuation of assets other than land

SACL's proposal 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 aeronautical assets (excluding land) were valued at around \$1.19 billion as at June 2000.

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

⁶ Land values include landfill.

the useful life of the assets. The resulting depreciation allowance in 2000-01 amounted 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 sought further information from SACL as follows:

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

In responding to the Commission's draft decision, SACL made changes to the relevant depreciation rates and asset values to derive a revised depreciation charge. That depreciation charge for assets existing at 1 July 2000 amounted to \$33.6 million. Assets added during the 2000/2001 financial year increased the depreciation charge to the \$35.3m.

The Commission's decision is that SACL has made appropriate adjustments to the asset base and depreciation charge. The effect of these changes implies an opening ODRC aeronautical asset valuation of \$951.2m and a depreciation charge of \$35.3m for the 2000/2001 financial year.

Cost allocation

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

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.⁷

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

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

⁷ Australian Competition and Consumer Commission, October 1999c, *Adelaide Airport, Proposal to pass through the price cap the costs of a Multi-User Integrated Terminal – Decision*.

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. After SACL lodged its proposal it 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. Since then it has made further adjustments to include a recently negotiated baggage trolley contract for the international terminal and costs associated with ground access services.

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 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 around 4 per cent per annum in real terms.⁸ This compares with estimated annual O&M savings of around 5 per cent in the draft decision. The difference arises because of changes to the cost base used to calculate the savings. See chapter 10 for details.

The decision adopts the revised \$57.7 million O&M costs proposed by SACL as a starting point, with real reductions of around 4 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 as a cost in determining 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.

⁸ In the draft decision the Commission estimated the annual O&M savings at around 5 per cent. The difference arises because of changes to the cost base to calculate the savings. See chapter 10 for details.

This 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 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 decision adopts a 60:40 debt to equity ratio (compared to 50:50 proposed by SACL).

The net effect of the changes is to give a post-tax nominal return on equity of 13.19 per cent. This is somewhat lower than the draft decision reflecting falls in interest rates since then.

The decision adopts a post-tax nominal return on equity of 13.19 per cent with an asset beta of 0.60 and a debt equity ratio of 60:40.

New Investment

The 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 has considered 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 addressed the NNI criteria. The Commission's analysis of SACL's application of the building block approach indicates that the investments made by SACL since 1 July 1998 are appropriately reflected in aeronautical charges. The Commission's decision is that the NNI criteria have been addressed.

Financial modelling

This 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 12.

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 would result in falling prices over time as traffic growth drives down unit costs and as operating and other expenses fall. Under the current regulatory framework there is no mechanism for the Commission to ensure SACL lowers prices in future in response to such changes.

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.

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 Commission's 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 10. The Commission also recommends a review of charges after five years from the introduction of the new prices.

The traffic forecasts used have been updated from those used for purposes of the Commission's draft decision. The draft decision used traffic forecasts developed by Tourism Futures International in March 2000. This decision uses revised forecasts developed by TFI in March 2001. The updated forecasts are somewhat higher. This largely reflects the impact of Impulse Airlines and Virgin Blue since their entry into the domestic aviation market in the middle of last year.

On the basis of the building block inputs discussed above, the Commission estimates an allowable revenue figure for 2000/01 of \$199 million. After smoothing prices to allow for real cost savings and volume growth over the next five years, this allowable revenue falls to \$183 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): Modelled revenue

Modelled revenue 2000/01	SACL Proposal	Commission original draft decision	Commission updated draft decision¹	Commission final decision
Asset base (2000/01)	\$1,690.3m	\$1,438.9m	\$1,422.3m	\$1,422.3m
Post-tax nominal return on equity	14%	13.7%	13.2%	13.2%
Return on capital	\$130.7m	\$98.0m	\$96.6m	\$96.6m
+ Return of capital (depreciation)	+ \$46.7m	+ \$38.1m	+ \$35.3m	+ \$35.3m
+ O&M costs	+ \$64.2m	+ \$56.4m	+ \$57.7m	+ \$57.7m
= Sub-total	\$241.6m	\$192.5m	\$189.5m	\$189.5m
+ Net taxation ²	+ \$16.2m	+ \$8.6m	+ \$9.2m	+ \$9.2m
- Assumed capital gain on land ³	- \$14.7m	\$0	\$0	\$0
- Contribution – aeronautical-related services	\$0	- \$22.6m	- \$15.2m	\$0
- Other Adjustments ⁴	- \$31.7m	- \$18.4m	- \$14.7m	- \$15.2m
Revenue 2000/01	\$211.5m	\$160.1m	\$168.8m	\$183.5m

1. Included for comparison purposes. The contribution from aeronautical-related services is included here, based on additional information provided by SACL. These figures can be compared to the final decision to demonstrate the effect of Direction No. 22.

2. 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.

3. 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.

4. SACL's original proposal (as shown in this table) estimated an allowable revenue, based on the costs included in the building block methodology, of \$243.2m. Based on the traffic volumes adopted in this decision, however, the prices proposed by SACL would generate revenues of around \$211m (had they been in place for the full financial year). This is effectively an adjustment made by SACL to compensate for future efficiency gains and volume growth. Similarly, the adjustments to the Commission's draft a final decisions represent the effect of price smoothing, as detailed in chapter 12.

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

SACL's proposal does not, however, address concerns about 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 Federal Airports Corporation'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 would improve congestion management. It would 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 decision is to not object to the price restructuring proposed by SACL. The decision also encourages SACL to further restructure charges to address emerging capacity constraints and associated congestion.

Commission decision

The Commission's decision is not to object to the prices specified in Table (iii) below. These prices are expected to generate revenues in line with the Commission's calculated allowable revenue figure of \$183 million.

Table (iii): Approved prices (GST exclusive)

Charge	Unit	Price Levels (GST exclusive)		
		SACL Proposal	Commission draft decision	Commission final decision
Runway	Per 1000kg MTOW per movement	\$4.00	\$3.07	\$3.44
International Terminal	Per passenger	\$9.50	\$7.28	\$8.17
Apron Parking	Per 15 minute block	\$35.00	\$35.00	\$35.00
(Bussing/stand off discount)	Per use of bus	(\$200.00)	(\$200.00)	(\$200.00)
Helicopter Movements	Per movement	\$25.00	\$25.00	\$25.00
General Aviation Parking	Per day or part thereof (>2 hours)	\$60.00	\$60.00	\$60.00

Table (iv): Approved prices (GST inclusive)

Charge	Unit	Price Levels (GST inclusive)	
		SACL Proposal	Commission final decision
Runway	Per 1000kg MTOW per movement	\$4.40	\$3.78¹
International Terminal	Per passenger	\$10.45	\$8.98
Apron Parking	Per 15 minute block	\$38.50	\$38.50
(Bussing/stand off discount)	Per use of bus	(\$200.00)	(\$200.00)²
Helicopter Movements	Per movement	\$27.50	\$27.50
General Aviation Parking	Per day or part thereof (>2 hours)	\$66.00	\$66.00

1. The runway charges are subject to the following proposed minimum charges:

- Scheduled regional airline services (MTOW 0-5 tonnes) - \$20.00 per movement (GST excl), \$22.00 (GST incl);
- Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement (GST excl), \$45.37 (GST incl); and
- All other aircraft - \$50.00 per movement (GST excl), \$55.00 (GST incl).

Currently the minimum charge for fixed wing aircraft is \$100 per landing (equivalent to \$50 per movement).

2. 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.

■ Chapter 1: Introduction

The decision is structured as follows. This chapter outlines the Commission's assessment process, past price notifications at Sydney Airport and the current 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 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 11.

Chapter 4 reviews the dual till approach adopted by SACL. The chapter considers the merits of dual till in terms of economic efficiency. Chapter 5 considers SACL's application of the dual till approach.

Chapters 6 to 8 focus on SACL's approach to valuing the asset base. Chapter 6 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 7. Chapter 8 assesses land assets. Allocation of the asset base between aeronautical and non-aeronautical services is considered in chapter 9.

The operating expenditures used by SACL are reviewed in chapter 10, and the rate of return in chapter 11.

The Commission undertook financial modelling to derive the prices in this decision. The modelling is explained in chapter 12. 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 13.

The Commission's decision is summarised in chapter 14.

1.1 Commission assessment process

On 3 October 2000 SACL provided the Commission with its *Revised Draft Aeronautical Pricing Proposal*.⁹ 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 (BARA), Brisbane Airport Corporation Limited (Brisbane Airport), British Airway Plc. (BA), the International Air Transport Association (IATA), Canberra Airport Group (Canberra Airport), Qantas Airways Ltd (Qantas), and Westralia Airports Corporation Limited (Perth Airport). Copies

⁹ Copies of Sydney Airports Corporation Limited, December 1999b, *Draft Aeronautical Pricing Proposal* and Sydney Airports Corporation Limited, October 2000c, *Revised Draft Aeronautical Pricing Proposal* are available on the Commission's website at <<http://www.accc.gov.au>>.

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.

The Commission released a draft decision on 9 February 2001. SACL proposed price increases that would accordingly increase annual revenue by \$116 million per annum, from \$89 million to \$205 million, an increase of approximately 130 per cent. The Commission's draft decision objected to the proposal but approved lower price increases. The prices accepted would increase SACL's annual revenue to \$160 million, an increase of around 79 per cent. SACL also proposed to restructure charges. The proposed restructuring was accepted in the draft decision.

SACL and other interested parties were given an opportunity to respond to the draft decision as part of the consultation process, by 5 March 2001. The Commission received submissions from Australia Pacific Airports Corporation (Melbourne Airport), the Board of Airline Representatives of Australia (BARA), Brisbane Airport Corporation Limited (Brisbane Airport), Gold Coast Airport Limited (Coolangatta Airport), Hastings Funds Management Limited, Impulse Airlines Limited, the International Air Transport Association (IATA), Northern Territory Airports Limited (Darwin and Alice Springs Airports), the Overnight Airfreight Operators Association (OAOA), Sydney Airport Corporation Limited (Sydney Airport), Virgin Blue Airlines Limited, and Westralia Airports Corporation Limited (Perth Airport). All submissions received by the Commission in response to the draft decision are available on the Commission's website at <<http://www.accc.gov.au>>. A summary of all twelve submissions received by the Commission in response to the draft decision is contained in section 1.4.

SACL provided the Commission with a formal notification on 30 March 2001. This decision relates to that notification.

On 19 April 2001 the Commission received a new direction (Direction No. 22) from the Federal Government in relation to the prices oversight arrangements at Sydney Airport.¹⁰ The Commission sought an extension from SACL to allow time for interested parties to comment on the new Direction. The Commission received responses from IATA, Brisbane Airport, Townsville Airport, Coolangatta Airport, Melbourne Airport, Sydney Airport and BARA. SACL granted the Commission an extension until mid-May 2001.

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

¹⁰ Minister for Financial Services and Regulation, Direction No. 22, 19 April 2001. See Appendix A for a copy of this Direction.

Table 1(a): Time-line

Date	Process
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
9 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.
30 March 2001	Commission receives formal notification from SACL.
19 April 2001	Federal Government issues Direction No. 22 in relation to Sydney Airport.
Late April-early May 2001	Interested parties comment on Direction No. 22.
May 2001	Commission releases its 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 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.¹¹ 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 services with no net increase in average prices. The proposed increases in 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 SACL's proposal

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

¹¹ SACL commenced operation of Sydney Airport in July 1998 following transfer of the lease from the FAC to SACL.

SACL's industry consultation process. On 3 October 2000 SACL submitted its proposal to the Commission for assessment purposes.

The proposal relates to changes in both the structure and levels of aeronautical charges at Sydney Airport. SACL forecasted that the level of charges proposed would 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 ¹	\$2.92 per 1000kg MTOW	\$8.00 ² per 1000kg MTOW	175%
International Terminal Charge	\$7.92 per 1000kg MTOW (14.59)	\$19.00 ² per passenger	71% ³
Apron Use Charge	Remote stands only, \$350 per day	\$35.00 per 15 minutes or part thereof – 6am to 11pm	NA ⁴
(Bussing/Stand Off Discount) ⁵	NA	(\$200.00 per use)	NA
Helicopter Charges	\$2.92 per 1000kg MTOW	\$50.00 ² per movement	+ 1047% ⁴
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) - \$20.00 per movement (GST excl), \$22.00 (GST incl);
 - Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement, \$45.37 (GST incl); and
 - All other aircraft - \$50.00 per movement (GST excl), \$55.00 (GST incl).
 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 helicopter MTOW of 1.5 tonnes.

The revenue increase proposed is around 130 per cent. SACL's proposal, and the Commission's assessment, were based on GST exclusive costs and prices. This decision specifies both GST exclusive and inclusive prices (see Chapter 14).

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 (i.e. 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 9.

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 2000/01.¹²

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.

¹² Average asset value over 2000/01.

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.
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 1 July 1998.¹³

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 (14 per cent post tax real on equity). 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 11.

¹³ This avoids double counting since the ODRC valuation of the seawalls is included in the runway and taxiway valuations.

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 6.

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

1.3.5 Operating and maintenance expenditure

Operating and maintenance (O&M) expenditures cover 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 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 10 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

Allowable revenue 2000/01	
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
Total	\$243.2m

* 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 \$211.5 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 71 per cent for international terminal charges;
- introducing a new apron use charge and a bussing/stand off discount; and
- 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 in response to the Commission's draft decision on Sydney Airport's aeronautical pricing proposal.

Sydney Airports Corporation Ltd (SACL)

SACL's response to the Commission's draft decision is divided into three parts.

The first part contains a response by NERA which centres on two main issues; the indexed historic cost approach to land value and the proposed 'modified dual till' approach to determining total revenues. NERA argues the historic cost approach has no economic merit and that a current value, opportunity cost approach to land should be adopted. In relation to the modified dual till, NERA states that the Commission has not considered the concepts of allocative efficiency and interdependency correctly and that it has not undertaken an assessment of market power issues.

In the second part SACL proposes a compromise approach to the dual till, in that the final proposal should not include a single till adjustment; the Commission should approve prices in year one that result in revenue of \$20m less than the calculated allowable revenue from declared services and a further price adjustment from year two at the full (smoothed) level. SACL offered to provide reasonable undertakings in relation to its future pricing of aeronautical-related services in which it may have market power.

In part 3 SACL makes comments regarding the implementation of the Commission's approach. Specifically that,

- the adoption of a single till approach may be an improper exercise of the Commission's power;
- the draft decision is in direct conflict with Government policy;
- SACL accepts the use of the building block methodology;

- SACL proposes to extend the asset lives of some assets therefore a change in asset valuation would be required;
- SACL generally accepts the Commission's approach to necessary new investment, however, believes the Commission relies too heavily on airline views when assessing airport performance against quality of services measures;
- SACL generally supports the Commission's view that SACL's ABC model approach to cost allocation is reasonable;
- SACL questions the reasonableness of the Commission's approach to reductions in operating costs and instead submits that cost should be reduced by 3 per cent per annum over five years;
- SACL has concerns about the Commission's approach to determining its asset beta, and
- SACL proposes to investigate time of day pricing as part of managing demand through price structure.

Board of Airline Representatives of Australia (BARA)

BARA makes the following comments:

- the Commission has erred in its interpretation and application of the regulatory framework;
- the adoption of a building block methodology is inconsistent with the Commission's legal obligations;
- the Commission has not fully taken into account interdependencies when considering the dual till approach;
- BARA is concerned about the quality of information used to verify the ODRC valuation of assets and the appropriateness of the Commission's approach;
- the draft decision fails to take into consideration the criteria contained in Direction No. 18 in respect of increases in charges resulting from necessary new investment;
- land valuation should be zero for regulatory purposes, but any new purchase of land necessary to expand aeronautical services should be valued at purchase price;
- operating costs should be reduced for the 2000/01 period, the Commission has not adequately considered benchmarking and that the upper limit for operating costs is around \$40 million;
- BARA agrees with the use of the weighted average cost of capital model to estimate the required rate of return, but has different views about the parameters, including the asset beta; and
- the traffic forecasts used in the draft decision, provided by SACL, underestimate both current levels of traffic and expected rates of growth.

International Air Transport Association (IATA)

IATA argues that the 79 per cent average increase approved by the Commission is still extremely high. IATA opposes SACL's application of the building block and dual till methodologies, and again argues that the modified single-till approach could include a 75 per cent contribution from non-

aeronautical activities. IATA disagrees with SACL's use of the opportunity cost approach to land valuation and states that aeronautical land should be valued at zero. IATA supports the Commission's five per cent reduction of SACL's depreciation costs and suggests that further adjustments could still be made. IATA submits that SACL's past operating costs have been inefficient and agrees with the Commission's downward revision of those costs, but, suggests reductions should apply to the 2000/01 period. IATA proposes a post-tax WACC of 6.14 per cent, stating that 7.7 per cent as proposed by SACL is too high. IATA submits that the draft decision does not comply with regulatory requirements, as information pertaining to some Necessary New Investment criteria was not addressed. IATA accepts the five-year financial modelling time frame, and suggests that annual reviews of the forecasts be conducted.

Virgin Blue Airlines Limited (Virgin Blue)

Virgin Blue expresses disappointment that a substantial increase in charges is likely to be approved. Virgin Blue seeks to ensure that two issues in particular have been addressed. The first issue concerns passenger growth volumes provided by SACL to the Commission and whether these factored in the entrance of the two new entrants into the marketplace. Secondly, Virgin Blue acknowledges that arguments pertaining to slot access are a matter for separate debate, but that this must be considered as part of all decisions regarding Sydney Airport.

Overnight Airfreight Operators Association (OAOA)

OAOA provided a brief submission in which it states that it would not address the Commission directly on the draft decision but that the Association fully endorses the position taken by BARA, particularly in regard to availability of information and fair process. OAOA requested that the Commission encourage SACL to consult with its users on the matter of pricing based on time of day usage.

Northern Territory Airports Limited (NTA)

NTA expresses that it is primarily concerned with the Commission's application of the single till pricing methodology based on the implications for future investments. NTA also opposes the Commission's application of the historic cost method of land valuation, also in terms of the future growth of Darwin Airport.

Gold Coast Airport Limited (GCAL)

The submission from GCAL supports SACL's application of the dual-till pricing methodology, and states that cross-subsidisation of aeronautical activities with income from non-aeronautical or aeronautical-related services leads to inefficient development and use of facilities. GCAL also supports SACL's proposed asset beta of 0.7, and argues that Australia's reliance on inbound tourism makes for a volatile market, thereby justifying a higher asset beta.

Impulse Airlines (Impulse)

Impulse submits that as outlined in previous correspondence, it has no objections to the new price structure proposed by SACL, and considers it to be reasonable. Impulse also states that it is content with the decision to retain the current charge for small and medium regional aircraft (15-19 seats). Impulse states that it shares the view that the minimal rise of airport charges on larger aircraft types should not impact on overall domestic air travel demand or prices.

Westralia Airports Corporation (WAC)

WAC opposes the Commission's application of the modified single till approach for efficiency reasons, particularly relating to incentives for investment. The WAC submission contains a substantial discussion of market power issues, and argues that the Commission has not provided any evidence to demonstrate that SACL possesses or has abused market power in the provision of aeronautical-related services. Finally, WAC believes that SACL's use of an opportunity cost approach to land valuation is appropriate.

Brisbane Airport Corporation (Brisbane Airport)

Brisbane Airport submits that the Commission's single till pricing methodology is inappropriate, contrary to Commonwealth Government policy, and economically inefficient. Brisbane Airport therefore supports SACL's dual till approach, in addition to the 0.7 asset beta calculation, and SACL's approach to land valuation. Brisbane Airport supports SACL primarily for efficiency reasons, particularly with regard to incentives for investment.

Hastings Funds Management (Hastings)

The submission received from Hastings argues that the Commission's application of the single till methodology is inappropriate and introduces sovereign risk into the future decisions of airport investors. However, Hastings' main concerns relate to the calculation of the rate of return. Hastings states that the calculation should be inclusive of the swap costs associated with airport operators' borrowing practices, and that an illiquidity premium should be incorporated into the asset beta calculation. Hastings believes that SACL's proposed asset beta of 0.70 is justified given the lack of liquidity in the airport sector. Finally, Hastings recommends that a gearing level be chosen from the same sample of listed entities that the Commission used to derive its equity beta, and argues that this level is in the order of 25-42 per cent.

Australia Pacific Airport Corporation Ltd (APAC, Melbourne Airport)

APAC submits that the approaches to the dual till pricing methodology, land valuation, asset depreciation, and cost allocation are all appropriate as applied by SACL. APAC argues that SACL's higher expenditure costs are likely due to factors specific to Sydney Airport, particularly in relation to managing congestion. APAC states that it generally agrees with the Commission's approach to the asset beta calculation, but its statistical analysis differs from that of the Commission. APAC did not nominate what it believes to be an appropriate asset beta in this submission, however an earlier submission argued that the asset beta of 0.70 as determined by SACL was appropriate.

Helicopters Operators

The Commission received correspondence from Blue Sky Helicopters and Helicopter Charter and Film Services expressing concern about the proposed increase in landing charges for helicopters. The primary issue brought to the Commission's attention concerned potential over-recovery of costs by SACL as a result of charging licensing fees as well as landing charges. General concerns were raised that the proposed level of charges.

■ 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.¹⁴ SACL is, in relation to the provision of aeronautical services at these airports, subject to an economic regulatory regime in many respects 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 explicit starting point prices or CPI – X price cap arrangements.

2.1.1 The *Prices Surveillance Act 1983* (Cth)¹⁵

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.¹⁶ In relation to the provision of those services, SACL is a declared person for the

¹⁴ 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, 2000d, *Annual Report*, p. 4.

¹⁵ Copies of sections 17, 20, 21 and 22 of the PS Act may be found in Appendix A to this document.

¹⁶ 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.

purposes of the PS Act.¹⁷ The notified services at Sydney Airport are the same as the aeronautical services that have been declared at the privatised airports.

SACL is required to notify the Commission if it proposes to increase prices of the notified services at Sydney Airport.¹⁸ SACL is prohibited from increasing prices unless, *inter alia*, the Commission serves a notice that it has no objection to a proposed increase.¹⁹

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 in relation to such notices such action in accordance with [Part III of the PS Act] as it considers appropriate’.²⁰

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.

Three directions relevant to the pricing of aeronautical services at Sydney Airport have been given to the Commission pursuant to section 20 – Direction No. 18, the ‘Unit Cost’ Direction and Direction No. 22.²¹

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. The main difference between these directions is that 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.

¹⁷ Ibid.

¹⁸ Section 22(2), PS Act.

¹⁹ Sections 22(1) and (2), PS Act.

²⁰ Section 17(1)(a), PS Act.

²¹ Direction No. 18, June 2000; Direction by the Treasurer to the Prices Surveillance Authority (a predecessor to the Commission) dated 15 October 1985, the ‘Unit Cost Direction’; Direction No. 22, 19 April 2001. See Appendix A for copies of these Directions.

Direction No. 18 directs the Commission to give special consideration to certain matters in considering SACL's aeronautical pricing proposals and deciding what action would be appropriate. These are:

- (1) Quality of service information obtained under Part 8 of the *Airports Act 1996* may be taken into account by the ACCC in considering notifications to increase prices for declared services. In reporting on the quality of service indicators, the ACCC will focus on the facilities and services provided by, or which could be influenced by, the airport operator.
- (2) The ACCC 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 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 ACCC 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 ACCC. The weight provided by the ACCC to each of the criteria may vary on a case-by-case basis.

The ACCC will provide a statement of reasons for its determination.²²

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.²³

²² Direction No. 18, June 2000.

²³ Unit Cost Direction, October 1985.

Direction No. 22

This direction was provided by the Minister for Financial Services and Regulation to the Chairman of the Commission on 19 April 2001. The Direction provides as follows:

I, Joe Hockey, Minister for Financial Services and Regulation, in pursuance of section 20 of the Prices Surveillance Act 1983, hereby direct the Australian Competition and Consumer Commission, in exercising its powers and performing its functions under the Act in relation to the pricing of services at Sydney (Kingsford Smith) airport, to give special consideration to the following matter:

- in assessing prices for aeronautical services, the Commission should not take into account the revenues generated, or costs incurred, in the provision of services other than aeronautical services.

2.1.3 The Commission's powers and functions in relation to SACL's notice

The Commission's task is to consider the notice given to it by SACL under paragraph 22(2)(a) and to take in relation to it such action in accordance with Part III of the PS Act as it considers appropriate.²⁴

Part III of the PS Act empowers to the Commission to take the following action in dealing with a notice given to it by SACL under s. 22(2)(a):²⁵

- serve a notice in writing on SACL stating that it has no objection to SACL supplying the goods or services of that description in that locality on the proposed terms at the proposed price;
- serve a notice in writing on SACL stating that it would have no objection to SACL supplying the 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;
- serve a notice in writing on SACL stating that it objects to SACL supplying the goods and services of that description in that locality on the proposed terms at the proposed price;
- not serve any notice on SACL.

Section 17(3) sets out the matters to which, subject to any directions, the Commission is to have 'particular regard' in deciding which of these would be appropriate. The directions set out matters to which the Commission must give 'special consideration'.

The Commission's function in this case is to consider a notice that relates solely to the declared aeronautical services. In relation to certain other services provided by SACL at the airport, known as 'aeronautical-related' services, the Commission has been given monitoring functions under s. 27A

²⁴ See s. 17(1)(a) of the PS Act.

²⁵ In addition, under s. 23 the Commission is required to keep a register containing copies of all relevant notices given to or by the Commission, a statement 'indicating the outcome of the consideration by the Commission of the relevant notice, including any action taken by the Commission in relation to the relevant notice and the outcome of any such action', and a 'statement of reasons for the outcome of the consideration by the Commission of the relevant notice'.

of the PS Act.²⁶ Under that direction, the Commission is to undertake formal monitoring of the prices, costs and profits related to SACL's supply of these services, and to report to the Minister on its monitoring activities following the end of each financial year. The policy objective of monitoring these services was, as expressed in the Government's pricing policy paper in November 1996, to ensure oversight of 'those aeronautical related services where operators could exert significant market power at individual airports'. The identification of those services followed the Commission's recommendations to the Government of those services in relation to which airports may be in a position to exert significant market power.

Services provided by SACL at Sydney Airport that are not included in either Declaration No. 89 or Direction No. 21 are not subject to any form of regulation under the PS Act.

2.1.4 Interpretation of the section 17(3) criteria

The Commission is not prevented from taking into account relevant matters that are not expressly referred to in s. 17(3) or the Directions. However, the notion of 'particular regard' means that the Commission must have regard to the section 17(3) criteria as fundamental elements of its analysis. It has therefore closely considered the meaning and scope of these criteria. The Commission's views are set out in this section. In section 2.2 the Commission sets out its views about its approach to the application of these criteria in the specific circumstances of Sydney Airport.

Paragraphs 17(3)(a) and (b)

The matters referred to in section 17(3) express broad economic and social concerns. They represent fundamental touchstones or reference points in the Commission's assessment of the proposed prices.

These criteria are to be taken into account in the exercise of the Commission's powers and the performance of its functions in relation to a notice that applies solely to the declared services. They must thus be interpreted and applied accordingly.

As far as s. 17(3)(a) is concerned, the Commission must consider the need to maintain investment in so far as it is relevant to the setting of prices for aeronautical services. This would seem to invite the Commission to consider the implications of aeronautical prices for investment decisions by SACL or airport users.

With respect to s. 17(3)(b) it would seem appropriate to interpret the term 'setting prices' to mean the setting of prices for the notified services that are the subject of the section 22 notice. The provision requires the Commission have particular regard to SACL's market power where that is relevant to its setting of aeronautical prices. The Commission considers that the key concern here, in the context of price regulation of infrastructure facilities such as airports, relates to the allocative efficiency implications of the existence of market power and its use by SACL in setting aeronautical

²⁶ Direction No. 21, October 2000. This Direction replaced Direction No. 19 (dated 30 June 2000), which in turn replaced Direction Nos. 14 and 16 (only the latter, which was dated 9 July 1998, applied to Sydney Airport). See Appendix A.

prices. It is because of these implications that the use of substantial market power is to be discouraged.

As discussed in the Commission's *Draft Statement of Regulatory Approach to Price Notifications* (the draft statement), the Commission considers it appropriate to interpret and apply the criteria in section 17(3) in the light of the current economic environment.²⁷ 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.

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 it as appropriate in order to have regard to the matters referred to in section 17(3) 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.

Paragraph 17(3)(b)

BARA argues that the approach just outlined does not give full effect to the language of s. 17(3)(b). It argues that this provision 'requires the Commission to consider how SACL would be likely to set its aeronautical prices if it faced competitive constraint'.²⁸ This is required, it is argued, by the requirement for the Commission to have regard to the need to discourage SACL from 'taking advantage of that [market] power in setting prices'. BARA asserts that this is required as a matter of law, and refers as authority for that proposition to the joint judgment of Mason CJ and Wilson J and the judgment of Dawson J in the *Queensland Wire* case, in which the High Court considered the meaning of the phrase 'taking advantage of' market power as it appears in s. 46 of the *Trade Practices Act (Cth) 1974* (TPA).²⁹ BARA's approach to this issue forms an essential foundation of its contention that the Commission should, in setting prices for aeronautical services, take into account the interdependencies between the costs and revenues of aeronautical services and those of

²⁷ Australian Competition and Consumer Commission, April 1998d, *Draft Statement of Regulatory Approach to Price Notifications*.

²⁸ Board of Airline Representatives of Australia, March 2001a, *Response to the ACCC's Draft Decision regarding Sydney Airport*, p. 8. Elsewhere in the submission this question is expressed as: 'if SACL faced competitive constraint, would it be likely to increase its existing prices?' (see e.g. at p. 11).

²⁹ *Queensland Wire Industries v Broken Hill Proprietary Co Ltd* (1989) ATPR 40-925.

non-aeronautical services provided by SACL at the airport, including retail services. This issue is at the heart of the current pricing proposals.

Since the BARA submission was received, the High Court has handed down its decision in the *Melway* case.³⁰ In that case, the court confirmed that the task of the court, in applying s 46 TPA, is to determine whether there was a causal connection between the existence of the market power and the relevant conduct; that is, even if the proscribed purpose is proved, did the person ‘use’ its market power to achieve that purpose, or could there have been another cause of that conduct. Whether a person ‘took advantage of’ market power is, for the purposes of section 46, a question of whether its conduct was facilitated by the existence of that market power.³¹

The court in *Melway* has emphasised that an analysis of how a firm would act in the absence of its substantial market power may not be the most appropriate approach to determining whether that firm in fact used its market power:

An absence of a substantial degree of market power does not mean the presence of an economist’s theoretical model of perfect competition. It only requires a sufficient level of competition to deny a substantial degree of power to any competitor in the market. To ask how a firm would behave if it lacked a substantial degree of power in a market, for the purpose of making a judgment as to whether it is taking advantage of its market power, involves a process of economic analysis which, if it can be undertaken with sufficient cogency, is consistent with the purpose of s. 46. But the cogency of the analysis may depend upon the assumptions that are thought to be required by s. 46.³²

The Court noted that in undertaking this analysis it is necessary to ensure that the appropriate assumptions are made in hypothesising about the nature of the market in the absence of the firm’s substantial power, and the firm’s likely conduct in that market:

It is one thing to compare what [a firm] has done with what it might be thought it would do if it lacked that power. It is a different thing to compare what it has done with what it would do in circumstances that are completely divorced from the reality of the market.³³

The Commission considers these observations to be apposite to the present case.

However, notwithstanding the obvious similarities in language between s. 46 of the TPA and s. 17(3)(b) of the PS Act, it is important to note significant differences in both the language and objects of these provisions. These mean that the Commission should exercise caution in adopting the interpretation of provisions of the TPA when interpreting and applying similar words in the provisions of the PS Act.³⁴ As the court in *Melway* has confirmed, s. 46 is concerned with ascertaining whether the corporation used its market power for a proscribed purpose. The notion of ‘taking advantage of’ in s. 46 must be interpreted in this context. In contrast, the PS Act is not concerned with the declared person’s purpose in setting prices.

³⁰ *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd* [2001] HCA 13, 15 March 2001, not yet reported.

³¹ *Ibid.* Gleeson CJ, Gummow, Hayne and Callinan JJ, paragraph 51.

³² *Ibid.*, para. 52.

³³ *Ibid.*, para. 58.

³⁴ The Federal Court has emphasised the importance of distinguishing the meaning of words when used in the context of regulatory legislation from their meaning when used in Part IV of the TPA. See for example the judgment of the Full Federal Court in *Foxtel Management Pty Ltd v ACCC* [2000] FCA 1161.

Further, the function of a court in applying s. 46 is very different from that of the Commission in considering the need to discourage a person from taking advantage of its market power in setting prices. The court's task in applying s. 46 is to ascertain whether, as a matter of fact, the corporation used its market power to engage in the relevant conduct. As discussed above, the test of considering what the corporation would have done absent its substantial market power is relevant in so far as it provides a useful tool for ascertaining the cause of a past event. In contrast, the Commission in this case is carrying out an administrative function pursuant to s. 22(2). It must determine, having regard to various statutory criteria and the directions, the appropriate *level* of prices for certain aeronautical services at Sydney Airport. In the exercise of that function it must have particular regard to the broad policy concerns expressed in section 17(3), not as tests to be applied in a technical sense, but, as basic touchstones or reference points to guide it.

One of these concerns is the need to discourage a person from taking advantage of its substantial market power in setting prices. In carrying out that task, the question of how the person would act in the absence of substantial market power is clearly a relevant consideration. However, given the nature of the task, it cannot be concluded that this is the only approach that the Commission could or should take to assessing what price would discourage a person from using its market power in setting aeronautical prices. Several methodologies could be used to determine the price or range of prices that would have that effect.

In this case, the Commission is of the view that asking the question of how SACL would act if it did not have substantial market power is a relatively unreliable analytical tool. Given the history of ownership of Sydney Airport, it is not clear what the market would look like if SACL did not have substantial market power. Further, it is difficult, if not impossible, to determine with confidence how SACL would act in that situation, in particular the extent to which it would take account of profits earned from non-aeronautical services when setting prices for aeronautical services. The evidence provided by BARA has not persuaded the Commission that these are insignificant concerns.

More fundamentally, the objects of the PS Act should be contrasted with those of the TPA. As discussed above, in the Commission's view a central concern of the Act when applied in the context of pricing infrastructure services such as aeronautical services, is to ensure that prices reflect an appropriate balance of the *efficiency implications* of aeronautical prices. On the other hand, 'the object of s. 46 is to protect the interests of consumers, the operation of the section being predicated on the assumption that competition is a means to that end'.³⁵ It seeks to achieve that objective by ensuring that firms having substantial power in a market do not engage in conduct that is intended to restrict the capacity of competitors to compete in that or other markets. Notwithstanding some commonalities in overall objective, the PS Act does not have that narrow focus.

Economic regulation presupposes the existence of market failure. Where that market failure cannot be structurally rectified to introduce more competition, regulation is necessarily a second-best outcome. Any methodology used to derive prices will necessarily provide a second-best proxy for estimating efficient prices. The question posed by s. 17(3)(b) is: which methodology provides the most robust and sensitive approach in the circumstances to ensure that SACL is discouraged from charging prices for declared services that represent the use of market power? The adoption of a

³⁵ Mason CJ and Wilson J in *Queensland Wire*, op. cit., p. 50,011.

cost-based ‘bottom up’ methodology such as the building block methodology is, in the Commission’s view, both an appropriate and relatively robust tool to achieve this objective, while recognising that the application of that methodology may require adaptation in particular circumstances. In a competitive market prices can be expected over time to reflect efficient costs.

This is not to say that the question of what SACL would do in the absence of substantial market power is not relevant to the Commission’s inquiry. Certainly, the outcomes resulting from the application of the Commission’s proposed methodology should, as far as possible, be benchmarked against prices resulting from other methodologies, and adjusted as necessary. That may include examination of the question whether SACL’s proposals in fact are caused by the existence of its market power.

Underlying BARA’s submissions is clearly the concern that, under the current pricing regime, SACL has been able to earn healthy profits from its business as a whole. Increasing prices for aeronautical services, without any regulatory restraint on non-aeronautical prices, must result from the exercise of market power. In the Commission’s view this is far from self-evident. The main cause for the proposed increases is the move to a dual till approach to pricing. It is not self evident that SACL would not be able to make such a change in pricing methodology (or that it would be more difficult to do so) if SACL did not have market power in relation to the provision of aeronautical services.

On the other hand, although it is not the central issue, the question of whether SACL can extend its aeronautical market power into the pricing of non-aeronautical services is, in the Commission’s view, a relevant consideration in examining s. 17(3)(b). This issue is discussed more fully in chapter 4. The Commission’s approach to applying these criteria to the SACL proposal is discussed in more detail in section 2.2 below. The building block methodology is discussed more fully in chapter 3. In chapters 4 and 5 the Commission sets out its approach to interpretation of s. 17(3), and in particular whether these provisions allow the Commission to have regard to prices charged by SACL for non-aeronautical services when considering a notification under s. 22 of the PS Act in relation to declared aeronautical services.

Conclusions

The Commission’s task is to decide whether it is appropriate to object to SACL’s proposed prices and, if so, whether it should specify lower prices.

The regulatory regime governing SACL’s proposal establishes a number of matters that must form fundamental elements of the Commission’s analysis. These are expressed primarily in paragraphs 17(3)(a) and (b) of the PS Act, Direction No. 18 and Direction No. 22. These matters must be considered in the context of the fact that the Government has chosen to declare a limited set of aeronautical services, and that SACL’s notice relates only to those services.

On the other hand the matters to which the Commission is required under s. 17(3) to have regard express broad economic objectives. The Commission considers that these criteria require the efficiency implications of aeronautical prices at Sydney Airport to be fully examined and reflected in its decision.

The Commission does not accept BARA’s submissions that, as far as paragraph 17(3)(b) is concerned, the central question to be addressed is how SACL would price aeronautical services if it

faced competitive constraints. In the Commission's view the application of a building block methodology provides an appropriate tool for assessing the objectives expressed in this paragraph.

2.1.5 Interpretation of Direction No. 18

Direction No. 18 sets out a number of matters to which the Commission is required to give special consideration 'in exercising its powers and performing its functions in relation to the pricing of aeronautical services at Sydney (Kingsford Smith) Airport'. Paragraph (2) of the direction sets out a list of criteria that the Commission is to 'use ... to guide its assessment of proposals to increase charges for declared services as a result of necessary new investment'.

The existence of the provisions of the Direction relating explicitly to new investment evidences a clear intent that new investments are to be given special treatment. Appropriate incentives should be given to Sydney Airport to invest in new infrastructure to support the provision of aeronautical services, by ensuring that, to the extent appropriate, the costs of those investments can be recovered in the prices for aeronautical services.

A question arises whether the Direction means that the Commission is only entitled to allow increases to prices of aeronautical services at Sydney Airport to the extent they result from new investment. The Commission considers that neither Direction No. 18 nor any other aspect of the regulatory regime prohibits it from allowing prices for aeronautical services to be increased for reasons other than new investment.

The wording of Direction No. 18 suggests that in the normal course proposals for price increases based on 'pass-through' of new investment costs will be made unaccompanied by any proposal to increase the prices for other reasons. However this does not, in the Commission's view, exclude the possibility that a proposal to increase aeronautical prices at Sydney Airport may not be based in part on other reasons than new investment.

Importantly, the Commission considers that the regime does not require it to take existing prices as given or prevent it from considering the appropriateness or efficiency of existing prices. In contrast with the privatised airports, no price cap is in place for aeronautical services at Sydney Airport. Further, the Commission regards it as significant that the reference to 'starting point prices' in Direction No. 15 was deleted from Direction No. 18 which replaced it. This indicates clearly that no assumption can be made about the appropriateness of existing levels of aeronautical prices at Sydney Airport. This issue is further discussed in chapter 7 of this decision.

The interrelationship between s. 17(3) of the PS Act and directions made under s 20 of the PS Act is critical to an understanding of the scope of Direction No. 18 and how it is to be applied. BARA argues that Direction No. 18 'has a primacy as compared to the matters specified by section 17(3)'.³⁶ 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 relevant directions should be regarded,

³⁶ Board of Airline Representatives of Australia, November 2000b, *Submission to the ACCC on SACL's Draft Pricing Proposal*, p. 44.

where their language permits, 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 (i.e. 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.

Direction No. 18 provides a framework for the Commission's consideration of the new investment component of proposed price increases. Certainly, the Commission must determine whether (or to what extent) the costs that are sought to be passed through constitute 'necessary new investment'. Beyond that, 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. While recognising their broad nature, the application of these criteria to the circumstances of a particular proposal is susceptible of yielding an answer in terms of a price or range of prices that would satisfy those broad objectives.

In contrast, the matters referred to in paragraphs (2)(a)–(i) 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. The Commission must assess the information available to it in relation to each of these matters and make findings of fact in relation to each. But having done so, the Direction does not indicate the way in which these matters are to be evaluated, their relative weights or the significance to be attributed to those facts. The Commission cannot simply mechanically apply the criteria. Indeed the Direction explicitly states that 'each proposal will be considered on its merits', and that 'the weight provided by the ACCC to each of the criteria may vary on a case-by-case basis'.³⁷ This indicates that the Commission may give to each criterion the weight that it thinks appropriately reflects its significance in the context of the objectives of the regime and the particular circumstances of the pricing proposal. These criteria are thus not of themselves 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 significance of its findings of fact in relation to the matters referred to in paragraph (2) of Direction No. 18 and determine the extent to which the costs of the new investment should be passed through into aeronautical prices.

In this light, the Commission does not regard Direction No. 18 as intended or effectual to exclude 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. In the context of Sydney Airport, the Commission considers it appropriate to allow the efficient costs of new investment (including a

³⁷ Direction No. 18, June 2000.

reasonable rate of return) to be reflected in price increases to the extent to which this results in efficient prices for those services. This is discussed further in chapter 7 of this decision.

In this respect, the Commission notes BARA's argument that, in assessing the new investment, the Commission should examine the question: 'if SACL faced competitive constraint, what prices would it be likely to levy in respect of the new investment (primarily the SA2000 project)?'.³⁸ This argument proceeds from BARA's claims about the nature and scope of s. 17(3)(b) of the PS Act. For the reasons set out in section 2.1.4, the Commission does not consider that this is the central question to be addressing, although it may be relevant.

2.1.6 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 this Direction in its submission. Similarly the issue is not raised in the other submissions received by the Commission.

The Unit Cost Direction is expressed as 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 efficient prices, 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. 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.³⁹ Further, it is not possible meaningfully to compare unit costs over time where a fundamentally different approach is adopted to such matters as asset valuation and pricing methodology.

2.1.7 Interpretation of Direction No. 22

The Commission has approached its consideration of Direction No. 22 bearing in mind that section 20 of the PS Act is intended to provide the Government with an opportunity of expressing matters of policy to which the Commission is to give special consideration in the exercise of its functions and powers.⁴⁰

³⁸ Board of Airline Representatives of Australia, 2001a, op. cit., p. 11.

³⁹ Australian Competition and Consumer Commission, 1998d.

⁴⁰ The Explanatory Memorandum to the *Prices Surveillance Bill 1983* stated that '[t]he purpose of this provision is to ensure that the operations of the [Prices Surveillance] Authority remain within the framework of *Government policy*' (emphasis added).

BARA states that ‘it is strongly arguable that Direction No. 22 is *ultra vires*’.⁴¹ BARA argues that Direction No. 22 is in direct conflict with the requirements of section 17(3). BARA submits that there is an ‘implied limitation within section 20 of the PS Act, that a Direction issued under that section cannot remove the requirements referred to in section 17(3)’.⁴² BARA then argues that even if the Direction is not *ultra vires*, the Commission is only required to give special consideration to the matter in question and this does not mean ‘blind compliance’.⁴³ BARA submits that having given the Direction special consideration, the Commission should weigh up the competing obligations of section 17(3) and the other policy considerations.

The ‘matter’ to which the Commission is to give special consideration is the assertion that the Commission ‘should not’ take certain costs and revenues into account. Although the Direction does not explicitly explain why the Commission ‘should not’ do so, the context in which the Direction was issued (subsequent to the Commission’s release of a draft decision) suggests that Direction No. 22 should be interpreted as a clarification of the Government’s policy on the question of the application of a dual or single till approach to pricing of aeronautical services at Sydney Airport.

Direction No. 22 supplements Direction No. 18 and the provisions of the PS Act. In practical terms, the Direction would appear to have the effect of expressing the Government’s policy regarding the application of these instruments to the particular consideration of SACL’s proposals. Essentially, that policy appears to be that, in considering the proposals in the light of those matters, a dual till approach that does not involve consideration of non-aeronautical services represents a more appropriate methodology for achieving the aeronautical pricing objectives set out in s. 17(3) and Direction No. 18.

2.2 Application of the regulatory framework to Sydney Airport

2.2.1 Background

The Commission’s task, in exercising its powers under section 22 of the PS Act, is, having regard to the relevant criteria, to determine whether or not the prices proposed by SACL are appropriate, and if not whether specification of 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.

The application of the s. 17(3) criteria to the pricing of aeronautical services at Sydney Airport raises specific complexities. As stated above, these criteria have not been drafted with airports in mind, let alone Sydney Airport. In order to exercise its powers effectively, the Commission has considered it appropriate and useful to formulate clearly a number of objectives that it seeks to achieve in exercising its discretion. This has been considered important to ensure that the Commission exercises its powers in a way that both gives effect to the policy intentions of the s.

⁴¹ Board of Airline Representatives of Australia, May 2001c, *Submission to the Australian Competition and Consumer Commission regarding Direction No. 22 – Sydney Airport Aeronautical Pricing Proposal*, p. 6.

⁴² Ibid.

⁴³ Board of Airline Representatives of Australia, 2001c, op. cit. p. 7.

17(3) criteria and directions and reflects the particular circumstances of aeronautical services at Sydney Airport. In formulating these objectives, the Commission has been mindful of ensuring 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 and the directions.

The intentions of the Government in implementing the regulatory framework applicable to core regulated airports were summarised in the pricing policy paper:⁴⁴

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.⁴⁵

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:

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.⁴⁶

As discussed above, the Commission considers that the fundamental economic objectives expressed in these provisions, in so far as they are to be applied to complex infrastructure-based services, require the Commission to examine the efficiency implications of the setting of prices for those services, and to ensure an appropriate balance between those implications.

The Commission also considers that, in assessing price notifications, the criteria set out in section 17(3)(a) and (b) are best assessed by an examination 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, Direction No. 22 or 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.

⁴⁴ 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.

⁴⁵ Department of Transport and Regional Development, *Pricing Policy Paper*, November 1996, p. 1.

⁴⁶ Section 17(3), PS Act.

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.⁴⁷

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 for the regulation of aeronautical prices at Sydney Airport 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.⁴⁸

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 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 ACCC 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 ACCC 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.⁴⁹

The Commission stands by this undertaking. In doing so it 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

⁴⁷Australian Competition and Consumer Commission, 1999a, op. cit., p. ix.

⁴⁸ 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.

⁴⁹Australian Competition and Consumer Commission, July 1998e, *Statement for the public register on proposed aeronautical charges at Sydney (Kingsford Smith) Airport*, p. 1.

efficient use of airport services and appropriate signals for new investment decisions.⁵⁰ Again, regulatory consistency suggests that the current proposal should be evaluated with these principles in mind.

SACL's 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 SACL's 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 that framework and 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 considers that, as far as possible, the prices for aeronautical services at Sydney Airport should 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
- the airport operator earns a reasonable rate of return which does not reflect monopoly rents.

These 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.

⁵⁰ Ibid., p. 2.

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

The third objective (signals to users for efficient use of airport services) reflects the provisions of 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.

The Commission notes that, as discussed in chapter 4, Direction No. 22 may have the effect of limiting the extent to which the Commission's consideration of SACL's proposals is able to reflect these principles.

■ 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,⁵¹ 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.⁵²

In using the building block approach SACL has sought to apply the approach set out in the DRP.⁵³ 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.⁵⁴

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 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.

⁵¹ Australian Competition and Consumer Commission, 1999c, op cit.

⁵² 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, October 1998f, *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*.

⁵³ Australian Competition and Consumer Commission, 1999a, op cit.

⁵⁴ See Australian Competition and Consumer Commission, 1999c, op cit; Australian Competition and Consumer Commission, April 2000g, *Brisbane Airport: Proposal to increase aeronautical charges to recover the costs of necessary new investment*; Australian Competition and Consumer Commission, April 2000h, *Perth Airport: Proposal to increase aeronautical charges to recover the costs of necessary new investment*.

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

- The building block methodology 'does not therefore address the broader question raised in section 17(3)(b) of PS Act: is SACL's pricing proposal consistent with behaviour of a firm facing competitive constraint?'⁵⁵
- 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 the Commission to take into account the interdependencies between aeronautical and non-aeronautical services at Sydney Airport;
- 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 (i.e. Direction No. 18, the Unit Cost Direction and section 17(3)), the proposal should be rejected by the Commission; and

⁵⁵ Board of Airline Representatives of Australia, 2001a, op. cit., p. 15.

- 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 these 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.

The question of whether the building block approach conflicts with s. 17(3)(b) of the PS Act has been dealt with in the Commission’s discussion of that provision in chapter 2. Similarly, the question of whether the building block approach allows appropriate consideration of interdependencies is considered in chapters 2 and 4.

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 firms 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.⁵⁶

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

⁵⁶ Australian Competition and Consumer Commission, April 2000i, *New Investment costs Pass-through: The distinction between “necessary new investment” and other forms of expenditure as it relates to the price cap – 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>>.

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.⁵⁷

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.⁵⁸

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 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 with the terms of Direction No. 18 and s. 17(3) of the PS Act.

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

As discussed in chapter 2, 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'.⁵⁹ 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, and that the Commission is required to use those matters when assessing the component of the proposed price increases that results 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.

⁵⁷ Sydney Airports Corporation Ltd, 2000c, op cit, p. 26.

⁵⁸ Ibid, page 27.

⁵⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 44-46.

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.

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, in assessing the extent to which the costs of the SA2000 and related investments should be passed through into aeronautical prices, 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 7.

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 have been separately addressed, and the Commission's findings are set out in chapter 7.

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 should not simply ‘re-open existing prices’.⁶⁰ 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.⁶¹

Accordingly, there is no demonstrated justification for the price adjustments in respect of pre-existing assets.

BARA argues in support of its contentions that such an approach ‘is both appropriate from an economic perspective, and maintains consistency in the regulatory approach in respect of Australian airports’.⁶² 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 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.

For the reasons set out in chapters 2 and 7, the Commission considers that the regime applicable to Sydney Airport is significantly different from that applicable to the privatised airports. In particular,

⁶⁰ Ibid., p. 59; and Board of Airline Representatives of Australia, 2001a, op. cit., p. 19.

⁶¹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 59-60.

⁶² Ibid, p. 108.

the absence of a price cap or explicit reference to starting point prices indicates that the Commission is not to take the existing prices as given or assume their appropriateness.

BARA further argues that the correct application of s. 17(3)(b) of the PS Act requires the Commission to address the question whether a firm in SACL's position facing competitive constraint would increase its prices.⁶³ It contends that it is 'highly unlikely' that this would be the case. This issue is discussed in the Commission's consideration of s. 17(3) in chapter 2, where the Commission concludes that the question posed by BARA is not the central question to be addressed. Further, the Commission is not persuaded that SACL would not raise its prices in the absence of its substantial market power.

In these circumstances, and given the Commission's acceptance of a dual till methodology (see chapter 4), the Commission considers it appropriate to have regard to whether the existing prices are efficient, and in particular whether the returns earned by SACL from the provision of aeronautical services are reasonable.

3.2.3 Sufficiency of information

The sufficiency of information provided by SACL, and the problem of information disparity as between SACL and the airlines, has been a central feature of this process.

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.⁶⁴ Clearly, where less information is available it has been more difficult for the Commission to reach an informed view about the matter concerned. However, 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 sufficiently probative 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 approach is explicitly envisaged by Direction No. 18.⁶⁵ However it is not of the view that this deficiency alone justifies objection to the proposals.

The Commission has been concerned to ensure that, as far as possible, information provided to the Commission by SACL has been made available to the airlines to ensure that the information is adequately tested and that the airlines have an adequate opportunity to present their case. The Commission recognises that the process has been less than optimal. SACL has claimed

⁶³ Board of Airline Representatives of Australia, 2001a, op. cit., p 19.

⁶⁴ Section 17(1)(a), PS Act.

⁶⁵ Direction No. 18 provides that 'each proposal will be considered on its merits having regard to the information available to the ACCC'.

confidentiality in relation to certain information, and has not provided other information in as timely a manner as the airlines would have liked.

The Commission has limited powers in this process to require the disclosure of information by SACL. In accordance with its published procedures, it has been concerned to respect claims for confidentiality where these cannot be demonstrated to be unjustified.⁶⁶

The Commission recognises the importance of ensuring that the information upon which it relies is adequately tested. In many instances the airlines are in a good position to test the probity of information supplied by SACL. The Commission has sought to ensure that, subject to valid confidentiality claims, SACL provides all information relevant to its proposals to the airlines. This has been largely achieved. The Commission rejects BARA's claim that the Commission should disregard *any* information that has not been provided to BARA.

In conclusion, while it recognises that there have been some delays in the provision of information to the airlines, the Commission is satisfied that the information upon which it relies to reach this decision has been adequately tested, and that the airlines have had adequate opportunity to prepare and present their case.

3.2.4 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.

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".⁶⁷ 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 7. In considering these issues the Commission notes that Direction No. 18

⁶⁶ See Australian Competition and Consumer Commission, 1998d, op. cit., pp. 5 – 6.

⁶⁷ Sydney Airports Corporations Ltd, 2000c, op. cit., p. 12.

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, 6 and 11 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, 6, and 11.

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 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.⁶⁸

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 price cap. BARA states 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

⁶⁸ Brisbane Airports Corporation Ltd, November 2000, *Response to the ACCC on the Sydney Airport Revised Draft Aeronautical Pricing Proposal*, p. 3.

over-recovery of costs. The importance of traffic forecasts and SACL's refusal to provide these forecasts to BARA is noted.⁶⁹

- 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 (i.e. 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 argues 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.⁷⁰

- 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 12.

BARA emphasises the different economic characteristics of the electricity and airports sectors, and argues that these differences render the Commission's reliance on its approach in the DRP inappropriate. Unlike airports, in the electricity industry the question of interdependencies does not arise from a regulatory perspective.⁷¹ The existence of ring-fencing arrangements, access regimes and retail contestability ensure that distribution business that are also engaged in retail are not able to earn excess profits from their retail activities. This means that any interdependencies between distribution and retail functions will not affect the economic decisions made by the owners of the integrated business. It also means that any market power associated with control of the wires cannot extend into retail services. This can be contrasted with the case of airports, where:

- the increased non-aeronautical profits associated with an expansion of aeronautical facilities (and hence greater passenger throughput) will affect those decisions; and
- part of the monopoly returns to providing aeronautical services is that it allows the airport operator to achieve excess profits on its non-aeronautical services.

Expressed briefly, the Commission's view on the first of these points is that BARA has not been able to persuade it that SACL would, in the absence of its substantial market power, take into account its profits from non-aeronautical services. More importantly, the Commission does not

⁶⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 110-111.

⁷⁰ Ibid.

⁷¹ See Board of Airline Representatives of Australia, 2001a, op. cit., pp. 16-17.

regard this as the central question to be addressed in considering the efficiency implications of SACL's market power.

As to the second point, the Commission recognises that SACL's power in the market for aeronautical services requires the Commission to have regard to the interdependencies between its aeronautical services and certain non-aeronautical services. However this does not require rejection of the building block approach, and can be achieved by modifying the application of that methodology to take those interdependencies into account. These issues are dealt with more extensively in chapters 2 and 4.

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 regulation⁷². 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 an 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 decision

In 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 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 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 – 12 of this paper.

⁷² See, for example, the Commission's submission to the Productivity Commission's Public Inquiry into the National Access Regime. Australian Competition and Consumer Commission, December 2000j, *Submission to the Productivity Commission Review of 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>>.

■ Chapter 4: The dual till methodology

4.1 Introduction

Two basic approaches 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.

Until recently regulation both in Australia and overseas has tended to be based on the single till approach to pricing. 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 is used in the U.K. regulatory regime - total costs are projected over a five-year regulatory period along with non-aeronautical revenues.

In the past airport prices were set by the FAC on a 'single till' basis. The FAC adopted a rate of return target on 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 well above the target rate of return, this meant that returns on the aeronautical side of the business were low, often negative. SACL's proposal is predicated on the dual till approach. This is a significant departure from the previous price notifications by the FAC. This chapter reviews the two approaches to pricing and variants of them. Section 4.2 outlines SACL's approach. Section 4.3 outlines the legislative framework in relation to the dual till. Section 4.4 provides an economic assessment of SACL's proposals both in terms of its implications for efficiency and market power. The discussion also assesses the alternatives proposed by BARA and other airport users. The Commission's conclusions are presented in section 4.5.

4.2 SACL's proposal

SACL's proposal is predicated on the need to recover aeronautical costs through aeronautical revenues. 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.⁷³ The cost allocation methodology used by SACL is discussed in detail in chapters 9 and 10.

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 and supporting legislative framework;⁷⁴ to economic arguments based on the promotion of economic efficiency and to precedents in other regulated industries.

In relation to economic efficiency SACL argues that its dual till proposal provides 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.⁷⁵

SACL also 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.⁷⁶

By contrast the single till is inefficient, SACL argues, 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.⁷⁷

In its response to the draft decision, SACL is critical of the approach taken by the Commission. SACL argues that the draft decision would:

- undermine incentives to invest in aeronautical-related services;
- provide incentives for SACL to divest itself of aeronautical-related services, in order to capture the economic rents;

⁷³ 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.

⁷⁴ Department of Transport and Regional Development, op. cit.

⁷⁵ See Sydney Airports Corporation Ltd, 1999b, op. cit., p. 2-2 and pp. 3-4 to 3-5.

⁷⁶ Sydney Airports Corporation Ltd, 2000c, op. cit., p.58. The quote is from AE Kahn, May 1991a, *Evidence on Behalf of the Government of the United Kingdom of Great Britain and Northern Ireland*, US/UK Arbitration Concerning Heathrow User Charges, p. 3.

⁷⁷ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 59.

- not ‘protect’ customers of aeronautical-related services by ensuring that they face lower prices; and
- not result in allocative efficiency in the use of aeronautical services.⁷⁸

4.3 Legislative framework

This section considers the scope of the legislative framework, and the extent to which it limits the Commission’s discretion in respect of the matters to which it may have regard in setting aeronautical prices, and the methodology it may adopt to derive those prices. The discussion focuses on whether, and if so to what extent, the Commission may have regard to the prices, costs and revenues associated with SACL’s provision of non-aeronautical services when setting aeronautical prices at Sydney Airport.

4.3.1 The dual till approach to pricing and the regulatory framework

SACL’s 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.⁷⁹

The 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*.⁸⁰

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

Under Declaration No. 89 “aeronautical services” are notified services for the purposes of s. 22 of the PS Act. SACL’s pricing proposals relate solely to certain aeronautical services. Pursuant to s. 22 of the PS Act the Commission’s task is to consider whether it should object to those prices, or specify alternative prices. The consequence is that only aeronautical services can be the subject of

⁷⁸ Sydney Airports Corporation Ltd, 2001a, op. cit., p. 52.

⁷⁹ Sydney Airports Corporation Ltd, 1999b, 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.

⁸⁰ Sydney Airports Corporation Ltd, 1999b, op. cit., p. 3-3. See above footnote regarding Direction No. 16.

the Commission's decision. The Commission cannot, for example, purport to set or object to the prices charged by SACL for non-aeronautical services. The implications of the declaration of aeronautical services on the interpretation of the s. 17(3) criteria is discussed in more detail in chapter 2.

The central issue is whether the Commission is entitled, in assessing SACL's pricing proposals in relation to aeronautical services, to have regard to and take into account the prices, costs and revenues associated with the provision by SACL of non-aeronautical services at Sydney Airport. If it is entitled to do so, the question would be whether it is constrained in the choice of methodology as to how they are taken into account. There would appear to be two possible methodologies. The first possibility is that the application of a dual till approach is modified or adjusted to take those matters into account in assessing the allowable revenues for aeronautical services. Alternatively a single till approach could be adopted whereby these matters are taken into account by including them in the cost base from which an overall rate of return is calculated.

In order to conclude that a dual till approach is required by the framework, it would be necessary to establish either that the prices, costs and revenues associated with the provision by SACL of non-aeronautical services at Sydney Airport are not relevant to the matters to which the Commission is entitled to have regard in assessing the SACL proposals, or that, even if they are relevant, the regime prohibits the adoption of either of these methodologies for taking them into account.

As to the first point, SACL contends that:⁸¹ –

SACL's prices for non-declared aeronautical services are an irrelevant consideration in the assessment of the draft notification in respect of declared aeronautical services.

Essentially, SACL's argument is that, because the Commission does not have a relevant function under the PS Act in relation to non-aeronautical services, the latter cannot be relevant to an assessment of a notice relating to aeronautical prices.

Shortly stated, our legal advice is that the Commission would be in error if it asserted that it was required by section 17(3)(b) of the Act to take into account any SACL market power in respect of undeclared aeronautical related prices when assessing a draft notification in respect of declared aeronautical services. To adopt that view would be to legally confuse the Commission's quite separate functions and powers under the Act.

The question is, as implied in the first quotation, whether those prices, costs and revenues are relevant to the matters to which the Commission is entitled to have regard in assessing the proposals.

The Commission takes the view, for the reasons set out later in this chapter, that because of the interrelationships and interdependencies between the prices and costs structures of aeronautical services and those of other services provided at the airport, the latter are relevant to a consideration of the efficiency implications of the prices for aeronautical services at Sydney Airport.

This decision sets out the Commission's reasons for its view that, in order to ensure efficient aeronautical prices and that SACL's market power is adequately constrained when setting aeronautical prices, it may be appropriate to take account of 'excess' profits earned by SACL from certain non-aeronautical services when determining the appropriate price for aeronautical services.

⁸¹ Sydney Airports Corporation Ltd, 2001a, op. cit., pp. 25-28.

The Commission stresses that to do so would not simply be based on the view that SACL has market power in relation to the provision of these services.

The next question is whether, if the relevance of these issues is accepted, the regime prohibits the adoption of a mechanism for bringing them into account in deriving aeronautical prices.

Prior to the issuing of Direction No 22, the question had arisen whether Government policy is that the Commission should adopt a dual till methodology, and if so whether that policy limited the scope of the Commission's discretion. SACL cites the pricing policy paper as support for its view that the Government's intention is that aeronautical prices at Sydney Airport should be set on the dual till basis proposed. The pricing policy paper states as follows:

The Government will not mandate the use of a "single till" approach to airport pricing. While implementation of the price cap on aeronautical charges post leasing does not preclude airport operators setting aeronautical charges as a residual – i.e. after taking into account the levels of non-aeronautical charges – the Government's objective is simply that aeronautical charging levels remain within the price cap.⁸²

And later:

Beyond the central issue of market power, it is not intended that the review place further obligations on airport operators in respect of pricing. As with the initial five-year period, the Government will not mandate the use of a single till approach to airport pricing. This will remain a matter for operators.⁸³

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. More importantly, it would also not seem to address the application of a dual till methodology that is adapted to bring non-aeronautical services into the equation.

In his submission dated 12 January 2001 the Hon John Anderson MP, Deputy Prime Minister and Minister for Transport and Regional Services, stated:

The pricing policy framework clearly states that the Government would not mandate the use of a single till approach to aeronautical pricing and it does not expect that approach to be mandated by regulatory control. To do so would clearly be at odds with the Government's objectives in privatising the airports.⁸⁴

SACL argues that '[n]otwithstanding any confusion that might have arisen from a narrow interpretation of the policy paper, the Government's policy on the single till issue has now been absolutely clarified by Minister Anderson by stating that the Government does not expect a single till approach to be mandated by regulatory control'.⁸⁵

Neither the pricing policy paper nor any other expression of Government policy absolve the Commission from its task of determining the 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.

⁸² Department of Transport and Regional Development, op. cit., p. 3.

⁸³ Ibid., p. 8.

⁸⁴ A copy of the Minister's submission may be found on the Commission's website at <<http://www.accc.gov.au>>.

⁸⁵ Sydney Airports Corporation Ltd, 2001a, op. cit., p. 29.

Absent the introduction of Direction No 22, the Commission is of the view that the regulatory framework does not – as a matter of law - prevent the Commission from taking the costs and revenues of non-aeronautical services into account in assessing the prices for aeronautical services. The question is whether Direction No 22 does so. In the Commission’s view it does not. Direction No 22 expresses Government view that, in assessing SACL’s prices for aeronautical services at Sydney Airport, the Commission “should not take into account the revenues generated, or costs incurred, in the provision of services other than aeronautical services”. As discussed in chapter 2, that view seems to be based on the policy that the dual till methodology - as proposed by SACL - is the most appropriate means of pricing aeronautical services at Sydney Airport. Under section 20 of the PS Act the Commission must give “special consideration” to that policy. Strictly speaking, provided it does so, it is not – as a matter of law - required to either implement that policy or do so in accordance with the procedure (if any is expressed in the direction) contemplated by the Minister. However, where the matter expressed in the direction reflects an expression of government policy, the intention of the legislation is clearly that the Commission give special weight to reflecting that policy in its decision.

Finally, the Commission notes 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 to the extent to which that is consistent with the regulatory framework.

4.3.2 Single till, interdependencies and the regulatory framework

Two issues arise for consideration here. The first is whether the regulatory regime requires the Commission, as a matter of law, to take into account the prices, costs and/or revenues of non-aeronautical services when setting aeronautical prices. The second is whether the regime requires the Commission, as a matter of law, to adopt a single till methodology as the mechanism for doing so.

Prior to the introduction of Direction No 22, BARA disputed 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 argued 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.⁸⁶

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;

⁸⁶ Board of Airline Representatives of Australia, 2000b, op. cit., p. 56.

- the profitability of SACL and the influence of that profitability on SACL's investment decisions; and
- the overall efficiency of the Sydney Airport operations.⁸⁷

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

BARA contends that the issue of Direction No. 22 by the Minister does not undermine these arguments. In commenting on this matter in its submission to the Commission, BARA argues that:

...Direction No. 22 is clearly inconsistent with the policy intent of section 17(3) of the Prices Surveillance Act 1983 ('PS Act') and the matters the Commission must take into consideration under Direction No. 18.⁸⁸

More specifically, BARA submits that Direction No. 22 is contrary to the requirements of both section 17(3)(a) and 17(3)(b) of the PS Act.

As discussed in section 4.3.1, the Commission is of the view that, in the absence of Direction No 22, it would be appropriate to 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 in order to achieve the objectives referred to in section 17(3) and section 2.2. 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' would clearly seem to be relevant to an assessment of these criteria.

However, in the Commission's view, even if these considerations require the Commission to have regard to the interdependencies and interrelationships between aeronautical and non-aeronautical services, it cannot be said that it is required to have regard to *all* non-aeronautical services. That depends on the nature and extent of the interdependencies. Furthermore, the regime does not require the Commission - as a matter of law - to adopt a single till approach or to bring into account in calculation of the revenues allowable for aeronautical services profits from *all* non-aeronautical services. The appropriate methodology must be determined in the light of *all* of the relevant criteria and to ensure that as far as possible the prices for aeronautical services achieve the objectives outlined in section 2.2. The discussion in this chapter and in chapter 5 considers the extent of these interrelationships and interdependencies, their relevance to the efficiency and market power implications of aeronautical prices, and the appropriate mechanism for giving effect to them. Finally, the Commission considers the implications of Direction No 22, concluding that it is appropriate to give effect to the policy reflected in that direction.

4.3.3 Conclusions

The Commission concludes that it is not required, as a matter of law, to apply either a dual till methodology or a single till methodology to the assessment of SACL's proposals. Further, it accepts that interdependencies between aeronautical and non-aeronautical services at Sydney

⁸⁷ Ibid., pp. 53-55 and p. 86.

⁸⁸ Board of Airline Representatives of Australia, 2001c, op. cit., p. 2.

Airport are likely to be relevant matters to take into account when setting aeronautical prices. 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 and directions. Accordingly, the methodology that is appropriate, and the way in which that methodology should be applied, depends on an assessment of which approach most adequately furthers the objectives of the regime.

4.4 Economic analysis

The preceding section outlines the regulatory framework as it applies to SACL. The discussion notes that the advent of Direction No. 22 provides the Commission with clear direction with regard to the government's policy on the general approach to pricing aeronautical services. The Commission, however, also considered the alternatives in light of the objectives spelt out in section 2.2. This section provides an assessment of SACL's proposal against the efficiency and market power objectives taking into consideration submissions from interested parties.

A particular consideration is the dynamic incentives the chosen approach would 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 would earn a reasonable rate of return on assets but would not generate monopoly rents. The objective relating to the efficiency of the cost base is not specifically relevant to the consideration of this question.

To assist in its assessment the Commission engaged consultants, the Network Economics Consulting Group (NECG), to provide advice on SACL's adoption of a dual-till approach to pricing. A report was made publicly available in May 2000.⁸⁹ 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.

4.4.1 Views of interested parties

Submissions to the Commission from operators of the privatised airports support SACL's adoption of the dual till approach to pricing aeronautical services. Brisbane Airport agrees with SACL that a dual till approach should 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. Coolangatta Airport supports the dual till approach on the basis that it is the airport operators, not airlines, which bear the risks associated with non-aeronautical investments.

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

⁸⁹ Network Economics Consulting Group, May 2000b, *'Dual Till' at Sydney Airport*. The report is available on the Commission's website at <<http://www.accc.gov.au>>.

between aeronautical and non-aeronautical services. The BARA submission outlines the following arguments against SACL's proposal.⁹⁰ 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'. BARA argues that interdependencies must therefore be explicitly recognised and incorporated when assessing aeronautical charges in order to avoid a transfer from airline travellers to the airport.

In its submission commenting on the Commission's draft decision, BARA argues that SACL earns higher than normal profits in all non-aeronautical services. Accordingly, it suggests that in not taking all non-aeronautical services into account, the Commission is failing to 'prevent SACL from taking advantage of its market power in setting aeronautical charges'.⁹¹

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.⁹²

In commenting on the Commission's draft decision, IATA re-iterates its argument that '75% of the total revenue derived from non-aeronautical sources should be applied to the aeronautical charges cost base'.⁹³

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'.⁹⁴

OAOA and the RAAA also endorse the arguments of BARA. The OAOA emphasises that one of its primary concerns is pricing based on time of day usage.

4.4.2 Efficiency - signals for new investment

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 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

⁹⁰ 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.

⁹¹ Board of Airline Representatives Australia, 2001a, op. cit., p. 25.

⁹² International Air Transport Association, December 2000a, *IATA submission to Australian Competition and Consumer Commission "Single Till"*, p. 3.

⁹³ International Air Transport Association, March 2001b, *ACCC's Draft Decision*, p. 6.

⁹⁴ British Airways, November 2000, *Aeronautical Pricing Proposal by Sydney Airports Corporation Ltd: Submission to the ACCC*.

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 per cent 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 non-aeronautical 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.

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.⁹⁵

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. 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.

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.

In its submission to the Commission, BARA recognises the limitations of the single till approach in terms of incentives for investment into non-aeronautical services. Frontier Economics, in representing BARA at the Commission's public discussion forum, for example stated:

⁹⁵ This point is discussed in Network Economics Consulting Group, 2000b, op. cit., pp. 5-6.

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.⁹⁶

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. 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).⁹⁷

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 than the single till approach.

In relation to aeronautical assets, the Commission considers that the provisions of Direction No. 18 relating to necessary new investment provide appropriate incentives for SACL to undertake efficient investment under a dual till framework.

4.4.3 Efficiency - 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 the dual till approach proposed by SACL, prices for aeronautical and non-aeronautical services may be higher than the single till. One reason for this is that the airport operator is able to charge the profit-maximising prices for the non-regulated (non-aeronautical) services. If SACL has market power in relation to some or all of these non-regulated services then it may be able to set prices above the levels that would prevail in a competitive market. This has the effect of both restricting output below socially optimal levels and generating relatively high returns for SACL.⁹⁸ While under the single till approach these revenues would be offset by reductions in aeronautical charges, under SACL's proposal no such mechanism exists. A second reason 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. Given these factors, across all airport services, the dual till as proposed by SACL may result in revenues in excess of the total cost of providing all

⁹⁶ G Woodbridge, Frontier Economics, Transcript of Proceedings: *Australian Competition and Consumer Commission, Sydney Airport Public Discussion Forum*, 13 December 2000, p. 88.

⁹⁷ International Air Transport Association, November 2000c, *Aeronautical Pricing Proposal by Sydney Airports Corporation Ltd (SACL)*, p. 4.

⁹⁸ Information on the returns from non-aeronautical services is available in Australian Competition and Consumer Commission, December 1999k, *Regulatory Report – Sydney Airport 1998/1999*. This is available on the Commission's website at www.accc.gov.au.

aeronautical and non-aeronautical services. More specifically, the bundle of services required by travellers may be priced above cost.

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.⁹⁹

In general, the dual till results in reasonable outcomes in regard to allocative efficiency *provided that the boundaries of the till are consistent with a correct delineation of the services with significant market power and that costs are correctly allocated between the two tills*. The Commission has some concerns that the current definition of aeronautical services has not been based on a rigorous assessment of market power. While this is largely a question of degree, the potential for allocative inefficiency thus remains. It should be noted that this concern relates primarily to SACL's *application* of the dual till rather than the dual till approach *per se*.

The size of any welfare loss associated with allocative inefficiency resulting from SACL's approach depends upon the airport's elasticity of supply and consumers' elasticity of demand. Of particular concern is the response of consumers; the more elastic their demand, the greater is the extent of the welfare loss. The strong growth in passenger volumes in response to the cheaper airfares offered by recent entrants in the domestic airline industry suggests that many air travellers *are* price sensitive. As a working assumption, therefore, it can be considered that demand is relatively price elastic for many travellers; in other words travellers may change their consumption decisions in response to changes in aeronautical prices. It follows that allocative efficiency losses arising as a consequence of the dual till may be worthy of consideration.

A counter to allocative inefficiency arguments has been put forward by Professor Kahn, who suggests that at congested airports, the move to dual till primarily results in a transfer of income and welfare from airlines to the airport operator.¹⁰⁰ Professor Kahn's reasoning is that where capacity is constrained, effective competition between airlines is limited by the scarcity of landing slots. Airfares thus already reflect the full scarcity value associated with those slots. The implication of such an argument is that allocative efficiency concerns are irrelevant, as changes in aeronautical charges

⁹⁹ Network Economics Consulting Group, 2000b, op. cit., p. 3.

¹⁰⁰ AE Kahn, January 2001b, *Evidence on Behalf of Sydney Airports Corporation*, p. 20.

merely redistribute income between airports and airlines. Kahn's argument is supported by Brisbane Airport in its response to the Commission's draft decision.

The Civil Aviation Authority (CAA) in the United Kingdom also commented on 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 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).¹⁰¹

Following a similar argument, SACL has argued that, given the capacity constraints at Sydney Airport, 'the implementation of SACL's proposed changes cannot be expected to change the price paid by air travellers'.¹⁰² Perth Airport makes the even stronger claim that any lowering of aeronautical charges results in a transfer of wealth from airports to airlines.

While the Commission recognises the merits of Professor Kahn's argument, it considers that in the case of Sydney Airport, the conditions necessary for the transfer argument to hold (and thus for allocative efficiency arguments to be refuted) do not hold. In particular, there remains significant scope for competition between airlines at Sydney Airport.¹⁰³ Many peak hour slots are currently occupied by small aircraft, so there is still significant scope for airlines to increase capacity in response to competitive pressures. Furthermore, many off-peak slots are still available. The empirical evidence to date does not support the argument that effective competition at Sydney is limited. The entry of Virgin Blue and Impulse Airlines has had a significant impact on airfares, including on airfares to and from Sydney.

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.¹⁰⁴

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:

¹⁰¹ Civil Aviation Authority, July 2000a, *Issues for the Airport Reviews – Consultation Paper*, p. 11.

¹⁰² Sydney Airports Corporation Limited, 2001a, op. cit., p. 8.

¹⁰³ This may be one difference between Sydney Airport and the London airports whose price-cap is the subject of review by the CAA. The London airports have a much larger proportion of slots occupied by Boeing 747s and other large aircraft.

¹⁰⁴ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 62.

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).¹⁰⁵

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.¹⁰⁶

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.¹⁰⁷

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 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.¹⁰⁸

NECG argues that the single till should therefore not be rejected on the basis that it adds to congestion.

The Commission is not persuaded that adopting SACL's proposed dual till approach is necessary for efficiently alleviating congestion at Sydney Airport. There are two main reasons for this.

The first is that the increase in prices proposed by SACL 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.

¹⁰⁵ Civil Aviation Authority, October 2000b, *The CAA Approach to Economics Regulation and Work Programme for the Airport Reviews – Position Paper*, p. 32.

¹⁰⁶ Board of Airline Representatives of Australia, 2000b, op. cit., p. 114.

¹⁰⁷ Ibid., pp. 114-118.

¹⁰⁸ Network Economics Consulting Group, 2000b, op. cit., p. 9.

The second reason is that 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 all of these services.

The primary issue in considering the benefits of dual till in managing congestion is the extent to which peak period pricing and other changes to SACL's price structure would be sufficient to satisfactorily manage congestion. In practice it may be the case that congestion is best managed through a combination of price increases and price restructuring. The relationship between the level and structure of aeronautical charges and congestion is discussed in more detail in section 8.5. In that discussion the Commission concludes that the price levels accepted in this decision should be sufficient to address any congestion issues that may arise over the next five to ten years when combined with appropriate price restructuring.

4.4.4 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, prices for complementary goods and services do not necessarily reflect their separable costs. BARA argues that SACL's dual till approach departs from such competitive outcomes, 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.¹⁰⁹

Furthermore, BARA argues that SACL's proposal 'would not be sustainable without the exploitation of market power'.¹¹⁰ BARA argues that SACL's approach to pricing ignores the reality of competitive markets, in that firms typically take the interdependencies between services into account when pricing, rather than treating each activity as an independent business. BARA cites various examples of how 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.¹¹¹

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.

¹⁰⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 106.

¹¹⁰ Ibid., p. 107.

¹¹¹ Ibid., p. 86.

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.¹¹²

Similarly, NECG argues that SACL's proposed 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.¹¹³

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. In its revised proposal, 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.

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

- 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.¹¹⁴

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.¹¹⁵

During the course of the Commission's assessment process, both SACL and BARA sought additional expert advice on the dual till/single till issue. SACL engaged Emeritus Professor Alfred Kahn to comment on its proposal with respect to both this issue and its approach to the valuation of

¹¹² Ibid., p. 85.

¹¹³ Network Economics Consulting Group, 2000b, op. cit., p. 2.

¹¹⁴ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 67.

¹¹⁵ Ibid., p. 68.

land, while BARA sought the advice of Professors Michael Crew and Paul Kleindorfer.¹¹⁶ These advisers examined the efficiency implications of the dual versus single till approaches to pricing, coming to considerably divergent conclusions. Professor Kahn concludes that ‘the effects of single-till are inefficient’¹¹⁷ while Crew and Kleindorfer that ‘a single-till regulatory approach is likely to be preferred significantly on efficiency grounds to multi-till operations’.¹¹⁸ This difference of opinion appears to stem from fundamentally different assumptions regarding the extent of SACL’s market power at Sydney Airport. For example, Professor Kahn argues that the apparently high returns accruing to airport operators from retail services is related to the locational advantage of the airport. Implicit in this argument is the point that SACL’s monopoly market power does not extend beyond those services defined as aeronautical. By contrast, Professors Crew and Kleindorfer explicitly state that SACL’s proposal ‘develops a multi-till approach to price regulation, but this proposed approach leads to a number of problems, not least of which is that it allows non-aeronautical services to be priced at monopoly levels’.¹¹⁹

The Commission agrees with Professor Kahn that the dual till is in general a superior approach to aeronautical pricing, provided the services defined as aeronautical include all those in which the airport operator has significant market power. The extent to which non-aeronautical services are, or are not, effectively disciplined by competition is a question of degree. It is expected that the Productivity Commission’s inquiry into price regulation of airports will address this issue in more detail.

4.5 Conclusion

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

The dual till approach to pricing aeronautical services provides certain important advantages over the single till approach traditionally applied by regulators. Most importantly, SACL would face significantly better signals for investment into contestable non-aeronautical services. Furthermore, the Commission has 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.

¹¹⁶ Kahn, 2001b, op. cit.; and Crew, M.A. and Kleindorfer, P.R., January 2001, *Regulation for Privatised Airports: Single-Till Versus Multi-Till Pricing Methodologies for Sydney Airport*. These reports are available on the Commission’s website at <<http://www.accc.gov.au>>.

¹¹⁷ Kahn, 2001b, op. cit., p. 22.

¹¹⁸ Crew and Kleindorfer, op. cit., p. 8.

¹¹⁹ Ibid., p. 4.

The Commission's endorsement of the dual till approach to pricing is qualified by its concerns relating to allocative efficiency and market power. As already discussed these are not concerns about the dual till methodology *per se*. Instead they primarily relate to SACL's *application* of the dual till methodology. The Commission considers that the allocative efficiency and market power disadvantages associated with SACL's proposed aeronautical prices would not arise if the extent of SACL's market power was clearly limited to aeronautical services.

This issue, and the position adopted by the Commission, is discussed in chapter 5.

■ Chapter 5: Application of the dual till methodology

Chapter 4 identifies two issues relevant in considering SACL's application of the dual till. One is the distinction between aeronautical and non-aeronautical services adopted. The other is allocation of costs between aeronautical and non-aeronautical services.

With respect to the latter issue, the Commission's decision accepts the approach to cost allocation proposed by SACL. The use of an activity based costing model to allocate common costs between contestable and non-contestable activities is considered to be a reasonable and workable approach in this context. SACL's approach to cost allocation is discussed in more detail in chapters 9 and 10.

This chapter considers the related issues of the aeronautical/non-aeronautical distinction and Direction No. 22. Section 5.1 considers the aeronautical/non-aeronautical distinction used by SACL. Consistent with the Commission's draft decision, the case for an alternative approach is put forward. Section 5.2 assesses the ramifications of Direction No. 22, while the Commission's conclusions are presented in section 5.3.

5.1 The aeronautical / non-aeronautical distinction

The aeronautical/non-aeronautical distinction relates to the boundary of the aeronautical services subject to declaration and its implication for aeronautical prices. This section considers submissions on the alternative application of the dual till methodology adopted in the draft decision and provides an assessment of the issues raised.

5.1.1 Draft decision

The draft decision adopted the dual till methodology, but took into account the airport operator's financial performance in the provision of certain non-aeronautical services in determining aeronautical prices.

The draft decision argued that this approach would yield better economic efficiency outcomes than SACL's proposal and is consistent with the regulatory framework.¹²⁰ It also considered that 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.

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

¹²⁰ Note that, subsequent to the draft decision, the Minister issued Direction No. 22.

Nevertheless the draft decision noted that 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 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 and car parks (including public and staff parking but not valet parking). 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 took the airport's performance in providing the monitored aeronautical-related services into account in determining aeronautical prices. The contribution from these services was derived as follows:

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

More details on the methodology adopted in the draft decision, including updated estimates of the parameters relevant to the estimation of the contribution from aeronautical-related services, is contained in Appendix B.

5.1.2 SACL's response to the draft decision

SACL criticises the draft decision on a number of grounds.¹²¹ It argues that the approach is not consistent with the legal framework. It also argues against the economic analysis in the draft decision. SACL notes that the draft decision will lead to lower prices than its proposal, but argues that this does not necessarily lead to allocative efficiency. SACL is also critical of Commission's interpretation of 'interdependency'. On this latter point, SACL emphasises that interdependency relates to the pricing of services with complementary demands and joint or common costs. Furthermore, SACL suggests that 'the cross elasticity of demand depends primarily on the extent to which the use of non-aeronautical services is *discretionary* from the perspective of airport users'.¹²²

SACL also claims that 'the ACCC's conclusions in relation to market power are founded on little more than unsubstantiated assertion'.¹²³ SACL is particularly concerned about the draft decision to take car parks costs and revenues into account in determining aeronautical charges.

SACL's submission in response to the draft decision puts forward an approach it characterised as a compromise to address the Commission's concerns. This suggested approach takes the following form:

- the final proposal should not include a single till adjustment;
- The ACCC should approve:

¹²¹ SACL's comments were made in the context of the legislative framework prior to the issue of Direction No. 22 by the Minister.

¹²² Sydney Airports Corporation Limited, 2001a, op. cit., p. 40.

¹²³ Ibid., p. 43.

- prices in year 1 that result in revenue of \$20m less than the calculated (smoothed) allowable revenue from declared services that would otherwise apply; and
- a further price adjustment from year 2 at the full (smoothed) level; and
- SACL will provide the ACCC with reasonable undertakings in relation to its future pricing of aeronautical-related services that may have a degree of market power.¹²⁴

In suggesting this approach, SACL has imputed to the Commission certain ‘real concerns’. These are described as:

- a concern that the level of price increase may have a detrimental “price shock” impact if implemented in a single step, rather than phased in; and
- that the definition of “aeronautical services” may not be sufficiently broad to capture all areas where the ACCC believes SACL may have a substantial degree of market power – and the absence of statutory ACCC power to prevent any future abuse of that market power under the current regulatory framework.¹²⁵

5.1.3 Other responses to the draft decision

The Commission received a number of submissions on the pricing approach taken in its draft decision. Melbourne Airport argues that if the regulated prices are set too low, then the potential welfare losses to society are greater than if they are set too high, as the airport operator faces inadequate investment incentives.

BARA criticises the dual till approach adopted by the Commission in its draft decision on the basis that the decision is not consistent with the outcomes that would be observed in competitive markets.

BARA argues that companies in competitive markets take complementarities into account in making investment and pricing decisions. An example given is car parks servicing shopping centres. Often these are provided free of charge. The reason for this is that the availability of free car parks increases shopping centre patronage and spending. In turn this may contribute to the shopping centre’s profitability. In a competitive environment the shopping centre operator will weigh up the costs and benefits of providing free car parks in making investment and pricing decisions.

Applying this principle to airports suggests that in a competitive market investors would target overall profitability of an airport rather than the aeronautical part of the business in isolation. In turn this lends support to BARA’s claim that a single till approach is more representative of competitive market outcomes than a dual till approach.

BARA goes on to argue that in setting prices for aeronautical services the Commission should take into account the airport operator’s profits in the provision of non-aeronautical services (with 75 per cent of above normal profits from non-aeronautical services used to reduce aeronautical charges). It argues that this more closely represents the outcomes of a competitive market than the approach proposed by SACL or that adopted by the Commission in its draft decision. BARA also argues that the approach addresses the requirements of section 17(3) of the PS Act. In other words BARA suggests that the prices based on a dual till approach would be higher than those that could be

¹²⁴ Ibid., p. 12.

¹²⁵ Ibid., p. 10.

sustained in a competitive market and are therefore only possible because of SACL's use of its market power.

5.1.4 Commission assessment

This section considers a number of issues raised in response to the Commission's draft decision in relation to the application of the dual till. These issues are:

- the case for taking the financial performance of *some non-aeronautical* services into account when only *aeronautical* services are declared;
- the impact of the draft decision's approach to dual till on investment incentives;
- the comparison with outcomes that would be observed in competitive markets; and
- SACL's compromise proposal.

The following discussion addresses each of these issues in turn.

Why might a regulator take the financial performance of some non-aeronautical services into account when the regulatory framework only covers aeronautical services?

In arguing for a dual till approach to pricing aeronautical charges SACL refers to precedents 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'.¹²⁶

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 other services which are close substitutes. Supply side substitution relates to the scope for other companies to supply the service.

The Commission's concern in the draft decision was that the detailed assessment has not been undertaken, and that the approach used by SACL in its application of the dual till would result in disadvantages in relation to allocative efficiency and market power. As discussed in chapter 4 the problems largely arise because the current delineation between aeronautical and non-aeronautical services does not seem to accurately represent the delineation between contestable and non-contestable services.

¹²⁶ Prices Surveillance Authority, op. cit., p. xxii.

SACL seems to recognise that the current delineation may have limitations. In its response to the Commission's draft decision SACL acknowledges that it has market power in relation to a number of aeronautical-related services including aircraft refuelling and check-in counters.¹²⁷

However, SACL argues that the approach adopted by the Commission is inconsistent with the legal framework. It argues that the framework limits the Commission's role to considering market power issues in relation to aeronautical services.¹²⁸

The Commission acknowledges that the issue of market power is largely a question of degree. Often, however, some non-aeronautical services must be used in order to also use the aeronautical facilities. The reason for this is that there is a bundle or package of services which airport users must use if they are to use the airport at all.

The Prices Surveillance Authority commented on this issue:

In arriving at a functional definition of aeronautical services it is necessary to consider what package of facilities is necessary to efficiently provide air transport services. On this basis it could be argued that all services relating to the transport of passengers and freight, from ground facilities (roadway or freight terminal) to the aircraft take-off, are aeronautical.

To provide the whole package of services and facilities to users of air transport, all aircraft-movement related facilities, terminals, (including all passenger facilities), baggage handling, check-in and ticketing, roads, car parks and access to other transport modes (such as buses, trains and taxis) which provide access to the airport are typically provided by a single supplier – the airport authority.¹²⁹

The point here is that the use of some of the services classified as non-aeronautical appear to be part of the package of services that must be used. In this sense they are non-discretionary. In such circumstances it may be appropriate to take into account the price of the full package of the non-discretionary services.

The concept of this package of services has been identified elsewhere. The Australian Competition Tribunal discusses the bundled nature of services provided by airports in its decision *Sydney International Airport*.¹³⁰ The decision considers extent to which the use of a particular service is necessary when using the broader 'set of physical assets' of airport services. It concluded that the:

...minimum set of physical assets necessary for international aircraft to land at [Sydney Airport], unload and load passengers and freight and depart in a safe and commercially sustainable manner" comprises "all the basic air-side infrastructure, such as the runways, taxiways and terminals and the related land-side facilities integral to the effective functioning of airside services."¹³¹

NECG has also identified the issue in terms of the concept of cluster markets. In previous advice to the Commission, NECG defined cluster markets in the following way.

The defining feature of a cluster market is that it groups services which are characterised by economies of scope in production and/or consumption so great as to require firms to compete not on individual services but rather on the set of services taken jointly. Expressed in terms of

¹²⁷ Sydney Airports Corporation Limited, 2001a, op. cit., p.40.

¹²⁸ Again, SACL's comments were made prior to the issue of Direction No. 22 by the Minister.

¹²⁹ Prices Surveillance Authority, op. cit., p. 59.

¹³⁰ *Sydney International Airport* [2000] ACompT 1 at paragraph 74 ff.

¹³¹ Ibid., at paragraph 99 ff.

substitutability, the ‘unbundled’ components of the cluster when procured separately are not close substitutes for the cluster procured as a whole. As a result, the pricing of a firm that supplied the cluster as a whole, and was the sole firm to do so, would not be constrained by competition from suppliers of the separate parts.¹³²

Following from this, it could be argued that an assessment of aeronautical prices should take into account other services in the cluster market or package of facilities necessary to efficiently provide air transport services. This was the rationale behind the Commission’s draft decision, and it remains a valid consideration. Airport users are likely to make decisions on the basis of the entire package of the services used and the prices paid for all of those services, not just the aeronautical services. Without taking the non-aeronautical services in the package into account the market power and allocative efficiency issues associated with aeronautical services may arise.

This differs from the approach proposed by BARA or NECG. Both argue that there is a case to take into account profitability of all non-aeronautical services. IATA and BARA, for example, propose a contribution of 75% of non-aeronautical profits in setting aeronautical prices. The Commission’s position is that only services which are integral to the airport’s operations and which are non-discretionary should be taken into account.

It is not clear that further efficiency gains could be achieved from implementing a contribution from all non-aeronautical services along the lines suggested by BARA and NECG. Where the use of services is discretionary the rents from the services can reasonably be considered as driven by the advantages of the location, which in itself is not sufficient justification for an explicit contribution. The primary impact of any contribution from such services would be to transfer rents from one group to another. The Commission considers that transfers should only be accepted where they can be shown to deliver clear efficiency gains.¹³³

The Commission’s view is consistent with the remarks of the CAA on the rent re-distribution 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’.¹³⁴

Incentives for new investment

Submissions commented on incentives to invest in aeronautical services and incentives to invest in non-aeronautical services.

Melbourne Airport’s submission argues that there are risks to aeronautical investment incentives if prices are set too low. Melbourne Airport’s concern is that the draft decision, by adopting a contribution from aeronautical-related services has focused too much on prices being too high. The Commission does not disagree with the position that there may be risks to investment incentives if prices are too low. However, it does not consider the comments relevant in the context of the current regulatory framework. Melbourne Airport’s view is based on the implicit assumption of a

¹³² Network Economics Consulting Group, 2001a, op. cit.

¹³³ See Network Economics Consulting Group, May 2000c, *Land Valuation at Sydney Airport*, p. 6. NECG also cited the British Monopolies and Mergers Commission (now the Competition Commission) on this issue.

¹³⁴ Civil Aviation Authority, 2000b, op. cit., p. 6.

price which is fixed regardless of any subsequent investment which is undertaken. It therefore fails to take into account the pass-through provisions of Direction No. 18 relating to necessary new investment. The Commission's view is that these provisions substantially address the risk of against welfare losses arising from possible under-investment.

Some submissions also criticised the Commission's approach on the basis that it does not send the appropriate signals to SACL with respect to investment in aeronautical-related services. For example, SACL argues that the 'effective confiscation' by the Commission of returns from non-price-controlled aeronautical-related services removes any incentive for SACL to make investments in these areas.¹³⁵ Similarly SACL, Melbourne Airport, Perth Airport, Northern Territory Airports and Hastings Funds Management all liken the Commission's approach to a variation on the single till.

These positions misrepresent the Commission's draft decision. The draft decision would not result in regulation of the aeronautical-related services. It would in no way limit the prices that SACL could charge for those services.

Comparison with competitive markets

BARA criticises the dual till approach adopted by the Commission in its draft decision on the basis that the decision is not consistent with the outcomes that would be observed in competitive markets. The Commission does not necessarily disagree with this argument. However, Sydney Airport does not operate in a competitive market. As discussed in the High Court's *Melway* decision:

It is one thing to compare what [a firm] has done with what it might be thought it would do if it lacked that power. It is a different thing to compare what it has done with what it would do in circumstances that are completely divorced from the reality of the market.¹³⁶

For this reason the Commission considers it more appropriate to consider the efficiency implications of the proposal rather than make a comparison with a hypothetical competitive market. In considering BARA's submission the Commission has taken this into account by assessing the impact of SACL's proposal, and proposals by BARA, against the efficiency and market power objectives outlined in chapter 2. The assessment is discussed in section 4.4.

Two aspects of the assessment are particularly relevant in considering BARA's proposal. The first is the question of market power. The second is incentives for development of non-aeronautical services.

While BARA's proposal may more effectively address concerns about SACL's market power it also has disadvantages in terms of incentives for investment into non-aeronautical services. If profitability from such investments flows into aeronautical pricing outcomes the airport operator will have limited incentives to develop non-aeronautical services. The Commission weighed up BARA's approach but concluded in favour of the dual till approach adopted in this decision.

While the Commission agrees that there are complementarities between aeronautical and most non-aeronautical services, this does not necessarily imply that the returns from all non-aeronautical

¹³⁵ Ibid., p. 34.

¹³⁶ *Melway Publishing Pty Ltd v Robert Hicks Pty Ltd* [2001] HCA 13 at para 58, 15 March 2001, not yet reported.

services should be taken into account.¹³⁷ The reason for this is that many of the non-aeronautical services provided by SACL are not integrally related to the provision of aeronautical services. While the fact that SACL is the monopoly provider of aeronautical services may provide 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 or some other contribution is therefore considered inappropriate.

SACL's compromise proposal

In past price notifications to the Commission, the previous operator of Sydney Airport, the Federal Airports Corporation (FAC) adopted a single till approach to pricing. The adoption of a dual till approach is therefore likely to generate a significant price shock to airport users. SACL's proposed compromise is at least in part premised on the basis that this is one of the Commission's main concerns. While the Commission is not unconcerned about price shocks, this is not the basis for the Commission's decision. The primary concern is with economic efficiency, and the impact of market power on efficiency.

In relation to the undertaking proposed by SACL, the Commission considers that the approach is not warranted given that the regulatory framework does not ask or allow the Commission to regulate non-aeronautical services. Furthermore, there is no mechanism under the PS Act by which the Commission could enforce such an undertaking.

5.2 Direction No. 22

5.2.1 Views of interested parties

The Commission sought comments from interested parties regarding the issue of Direction No. 22 by the Minister. In general, airport operators responded positively. Submissions from Melbourne Airport, Brisbane Airport, Coolangatta Airport and Townsville Airport are all supportive of the government's direction. SACL supports the Direction on the basis that it is consistent with:

- a sound economic basis for pricing aeronautical services at Sydney Airport; and
- the Commonwealth's policy on airport pricing.¹³⁸

By contrast, airport users expressed concern about the direction. IATA specifies two particular issues:

1. It appears that any independence of the ACCC in economic regulation of airports is being eroded. Hence, it brings into question the whole regulatory process in Australia on airport charges and the ability of ACCC to deliver a fair and unbiased decision.

¹³⁷ Complementarity occurs when lower aeronautical charges give rise to increased revenues to other businesses at the airport as a result of increases in passenger throughput.

¹³⁸ Sydney Airports Corporation Ltd, May 2001e, *Sydney Airport Aeronautical Pricing – Direction No 22*.

2. The Directive is a very serious departure from international practices and ICAO policies on airport charges, which could result in an unreasonable increase in costs to the airlines and their passengers.¹³⁹

IATA requests that if the Commission were to implement the Directive, special consideration be given to the issues of cost allocation, the rate of return on aeronautical assets, new investment and land value.

A detailed submission was also provided by BARA. BARA makes three main points, arguing that:

- Direction No. 22 gives rise to inconsistencies among the legal instruments under which the Commission must assess SACL's proposal;
- Direction No. 22 may be *ultra vires*; and
- the Commission should reconsider other aspects of its decision should it adopt the dual till approach as proposed by SACL.

The inconsistency and *ultra vires* arguments are outlined in more detail in chapters 2 and 4 of this decision.

In its submission, BARA re-iterated its earlier arguments that, rather than adopting the building block methodology, existing aeronautical prices should be regarded as sufficient to compensate SACL with respect to pre-existing investment at Sydney Airport, and that an adjustment to prices in relation to the SA2000 project should be considered in light of the provisions of Direction No. 18. This issue is discussed in Chapter 3.

Should the Commission adopt the building block approach and comply with the matter specified in Direction No. 22, BARA argues that the Commission should reconsider other aspects of the Commission's decision; namely:

- the allocation of common costs between aeronautical and non-aeronautical services;
- the appropriate cost of capital; and
- how aeronautical land is valued at Sydney Airport.¹⁴⁰

The Commission's views on the matters highlighted by IATA and BARA are discussed in chapters 6 to 11 of this decision.

5.2.2 Commission assessment

The Commission has given special consideration to the policy reflected in Direction No. 22. The direction would appear to clarify the previous uncertainty – reflected in the parties' submissions and the Commission's draft decision - regarding the government's policy on this issue. The Commission considers that this policy may differ from the approach that would be appropriate in order to give effect to the objectives set out in chapter 2. However section 20 requires the Commission to give a special weight to expressions of government policy, as set out in directions, when considering notices given to it under s 22(2)(a) of the PS Act. The Commission considers it appropriate, in this

¹³⁹ International Air Transport Association, May 2001d, *IATA Submission to the ACCC on Sydney Kingsford Smith Airport Charges*.

¹⁴⁰ Board of Airline Representatives of Australia, 2001c, op. cit., pp. 8-9.

case, to give effect to that policy, and, accordingly, not to bring the costs and profits of aeronautical-related services into account when specifying a price pursuant to section 22(2)(b)(iii) PS Act.

Adopting the approach articulated in the direction simplifies the regulatory framework applicable to Sydney Airport. Furthermore, as noted in chapter 4, the implications of the framework as it stood prior to the issue of Direction No. 22 were relatively uncertain. This uncertainty is minimised by the position the Commission has taken for this decision. This is particularly relevant in light of the pending privatisation of Sydney Airport.

In relation to the arguments of BARA and IATA regarding the need for additional consideration of certain aspects of the Commission's decision, the Commission's view is that these issues have been examined very thoroughly during the course of the Commission's assessment process. Accordingly, the Commission is of the opinion that the issue of Direction No. 22 does not of itself necessitate revisions to other aspects of the Commission's decision.

5.3 Conclusion

The discussion in chapter 4 and this chapter detail the complexities associated with the Commission's consideration of the dual till issue. In general, it is the Commission's view that the dual till approach to pricing aeronautical services has considerable merit, as it focuses regulation on areas where the airport has market power and is more likely to promote efficient pricing outcomes than the single till. Those services which are relatively contestable, such as retailing activities, are not subject to prices oversight.

The Commission has, however, some reservations about SACL's application of the methodology. The draft decision took SACL's financial performance in providing aeronautical-related services into account. The rationale for taking this approach was that the resulting aeronautical prices would yield better economic efficiency outcomes and more effectively constrain market power than SACL's proposals. The aeronautical-related services taken into account are already subject to prices monitoring under the existing regulatory framework.

In this decision the Commission moves away from this position. It adopts SACL's application of the dual till and does not take the financial performance of aeronautical-related services into account in making its decision.

The move from the position adopted in the draft decision was taken after the Minister for Financial Services and Regulation issued a new direction on April 19 2001 (Direction No. 22) pursuant to section 20 of the Prices Surveillance Act 1983.

Such directions do not bind the Commission to taking a particular approach. However, the Commission must give them special consideration in making its decisions. In this case the Commission considers that the direction warrants a departure from the approach taken in the draft decision.

It should be noted that previous price notifications relating to Sydney Airport have adopted a single till approach. Until now the Government has not clearly stated its position on the dual till or the boundary of the till. Direction No. 22 clarifies the Government's policy intent in relation to this issue. In effect the Government's policy intent is to apply the dual till approach on a narrower basis than

proposed by the Commission in its draft decision. In practical terms this means that aeronautical-related services and in particular car parks (where the Commission identified an issue of market power) should not be taken into consideration in setting aeronautical charges at Sydney Airport.

Implementation of the policy intent results in higher price increases than proposed by the Commission in its draft decision. The revised approach to the dual till adds around \$15 million per annum to SACL's revenues.

The Commission notes that the Productivity Commission is currently considering these and other matters in its current inquiry into price regulation of airport services.

■ Chapter 6: Asset base – assets other than land

6.1 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.¹⁴¹

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 9.

6.2 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 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 proposal in early 1999. The ODRC value of aeronautical assets as at 1 July 2000 included in the draft 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 proposal was also based on the 1 July 1998 valuation rolled forward to 1 July 2000. However, it was then 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'.¹⁴² Among the more significant items to change were:

- treatment of land-fill. This transferred \$188.8m from land to other fixed assets, and

¹⁴¹ Australian Competition and Consumer Commission, 1998e, op. cit.

¹⁴² Sydney Airports Corporation Ltd, 2000c, op. cit, p. 70.

- 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 ‘[t]he 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’.¹⁴³

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.

Finally, in March 2001, SACL provided the Commission with a financial model that incorporated ODRC value for aeronautical assets (excluding land) of \$951.2m. This value excludes land-fill. The ODRC value also reflects the revision of depreciation charges on a number of assets identified by the Opus report.

6.3 Views of interested parties

Reflecting the structure of SACL’s 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.¹⁴⁴

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 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

¹⁴³ 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.

¹⁴⁴ Board of Airline Representatives of Australia, 2000b, op. cit, p. 59.

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 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.¹⁴⁵

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*)'.¹⁴⁶

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 No. 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, and
- some assets could not be regarded as 'new investment' according to the Commission's definition.¹⁴⁷

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 questions 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 to the Commission's issues paper argues that:

¹⁴⁵ Ibid, pp. 45-46.

¹⁴⁶ Ibid, Appendix 11, p. 4.

¹⁴⁷ 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'.

... 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 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.¹⁴⁸

Commenting on the appropriateness of an ODRC approach to valuing the assets of Sydney Airport, BARA argues that:

A building block methodology that relies predominantly on an ODRC valuation might be justified as a means of setting a starting point price in instances where existing prices bear no relationship to the commercial position of the enterprise. However, for Sydney Airport, this is clearly not the case. Prices were reviewed and set by the Commonwealth Government in 1997. These prices took into account SACL's commercial objectives and its need to provide dividend payments to its shareholder. Moreover, in its earlier submission, BARA presented information which supported the view that existing prices were sufficient to allow SACL to earn a reasonable rate of return. In these circumstances, the Commission's decision to adopt a building block methodology based on ODRC valuations appears unjustified.¹⁴⁹

BARA also questions the reliability of SACL's ODRC valuation, stating that:

It is a surprising outcome that the 1998 valuations plus the cost of new investment should equal the 2000 valuation, when many assets included in the 1998 valuation were rebuilt or replaced as part of the new investment. These assets should have been optimised out of the valuation. The assets rebuilt include several aprons.¹⁵⁰

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'.¹⁵¹

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'.¹⁵² 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's Necessary New Investment guidelines, and are agreed

¹⁴⁸ Board of Airline Representatives of Australia, 2000b, op. cit., p. 35.

¹⁴⁹ Board of Airline Representatives of Australia, 2001a, op. cit., p. 30.

¹⁵⁰ Id.

¹⁵¹ Australia Pacific Airports Corporation, November 2000b, *ACCC Consideration of Draft Pricing Proposal for Sydney Airports Corporation Limited – Response to Issues Paper*.

¹⁵² Sydney Airports Corporation Ltd, 1999b, op. cit., p. 5-16.

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.¹⁵³

6.4 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'.¹⁵⁴

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'.¹⁵⁵

6.5 Discussion

SACL's proposal is 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.

¹⁵³ Brisbane Airport Corporation, op. cit.

¹⁵⁴ Opus International Consultants Ltd, *Sydney Airport Valuation 2000 Review*, 2000, p. 69.

¹⁵⁵ Id.

Second, the maintenance of revenue streams over time at 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.¹⁵⁶

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

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.¹⁵⁷

SACL's proposals for asset valuation are consistent with the DRP in that they are based on the ODRC methodology. This decision does not revisit SACL's use of the ODRC methodology. Instead it focuses on SACL's *application* of the ODRC methodology.

6.5.1 Information Issues

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

¹⁵⁶ Australian Competition and Consumer Commission, 1998e, op. cit., p. 40.

¹⁵⁷ Ibid., pp. 41-42.

BARA disagrees with SACL and has set out its concerns in section 6.3 of its submission to the Commission's issues paper. 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 SACL's proposals.

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

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.¹⁵⁸

As discussed elsewhere in this 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'.¹⁵⁹

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.¹⁶⁰

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 confidence in SACL's later valuation. However, the Commission would generally prefer that greater rather than less transparency is 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. The following discussion highlights a number of areas in which SACL has revised its valuation in response to the Commission's draft decision.

¹⁵⁸ M Quinn, Rider Hunt Pty Ltd, Transcript of Proceedings: *Australian Competition and Consumer Commission Sydney Airport Public Discussion Forum*, Melbourne, 13 December 2000.

¹⁵⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 42.

¹⁶⁰ Opus International Consultants Ltd, op. cit., p. 2.

6.5.2 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 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.¹⁶¹

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 '[i]f 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'.¹⁶²

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.

6.5.3 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

¹⁶¹ Australian Competition and Consumer Commission, 1998d, op. cit., p. 45.

¹⁶² Board of Airline Representatives of Australia, 2000b, op. cit., Appendix 11, p. 10.

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, in Opus' view 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 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.¹⁶³

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 8).

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

¹⁶³ The Hon John Anderson MP, Minister for Transport and Regional Services, 'Sydney's Future Airport Needs', Media Release, 13 December 2000.

international/domestic terminals'.¹⁶⁴ 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 decision is that valuing SACL's assets on a brown-fields basis is reasonable. SACL has addressed those parts of its asset valuation that the Opus report identified as sub-optimal.

6.5.4 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 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.¹⁶⁵

At Appendix J of its proposal SACL provided a list of aeronautical assets (excluding movable plant) prepared by Maunsell McIntyre.¹⁶⁶ 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'.¹⁶⁷

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.¹⁶⁸

¹⁶⁴ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 78.

¹⁶⁵ Australian Competition and Consumer Commission, 1998e, op. cit.

¹⁶⁶ Sydney Airports Corporation Ltd, 1999b, op. cit., Appendix J.

¹⁶⁷ Board of Airline Representatives of Australia, 2000b, op. cit., p. 139.

¹⁶⁸ Ibid., p. 140.

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's draft decision noted that a number of its recommendations 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 did not attempt to recalculate the depreciation charge in SACL's building block using the recommendations in this decision, but rather estimated an indicative maximum allowable revenue figure in this decision using 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 incorporated a depreciation charge of \$40.1 million, the Commission based its estimation of maximum allowable revenue on a depreciation charge of \$38.1 million.

In responding to the Commission's draft decision, SACL made appropriate changes to the relevant depreciation rates and asset values to derive a revised depreciation charge. That depreciation charge, contained in a financial model provided to the Commission in March 2001, amounted to \$35.3 million.

6.5.5 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, and describes SACL's response to those views.¹⁶⁹

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 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

¹⁶⁹ SACL's response to the issues raised in the Commission's draft decision and in the Opus report are contained in Attachment E of SACL's response to the Commission's draft decision. See Sydney Airports Corporation Ltd, 2001a, op. cit.

- 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.¹⁷⁰

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 per cent 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.

For the purposes of determining economic income from land appreciation, land is land. SACL has failed to recognise this.¹⁷¹

Opus notes that '[n]o 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'.¹⁷² 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 identify difficulties with the information that would support Maunsell McIntyre's valuation. Opus reports:

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.¹⁷³

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 was that for the purposes of determining regulated aeronautical prices land-fill is indistinguishable from other land and it should therefore be excluded from the ODRC valuation of assets. SACL responded to this by removing the value of landfill from the non-land aeronautical asset base. The Commission's decision includes the area represented by land-fill in the valuation of land (see chapter 8)

¹⁷⁰ Sydney Airports Corporation Ltd, 1999b, op. cit., p. 81.

¹⁷¹ Board of Airline Representatives of Australia, 2000b, op. cit., pp. 125-6.

¹⁷² Opus International Consultants Ltd, op. cit., p. 32.

¹⁷³ Ibid., p. 30.

Regarding seawalls, the Commission's draft decision was that SACL review its valuation and depreciation allowance drawing on comments contained in the Opus report. In response, SACL's consultants advised that the scale of seawalls has already been optimised in the original Maunsell McIntyre valuation. The depreciation charge was however reduced.

Airfield Grass – In SACL's proposal, the total ODRC value of airfield grass in SACL's proposal was \$23.5m, with the ORC estimated at \$45.2m. 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 it is a sunk asset that does not require replacement.) Consistent with the DRP 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.

Opus further notes that the ORC valuation should reflect the optimised sizing of runway 16R-34L.

The Commission's draft decision was 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.

In response, SACL's advisers argue that a combination of turfed areas and grassed areas may be appropriate. SACL's advisers further agree that a 25 year depreciation period may not be appropriate but argue for a minimum 1 per cent depreciation rate to allow for technological obsolescence. As with seawalls, Maunsell McIntyre claims that the sizing of runway 16R-34L was optimised in the previous valuation.

The effect of SACL's changes in response to the Commission's draft decision is to reduce the ORC of airfield grass by \$18.7m, but to increase the ODRC value by \$8.5m due to the effect of lengthening the assumed asset life. The Commission regards these adjustments as reasonable.

Runways, Taxiways and Aprons – For the purposes of its ODRC valuation, SACL has split its runways, taxiways and aprons (or RTAs) 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 6(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 RTAs 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 RTAs.¹⁷⁴

¹⁷⁴ Ibid., Table 4 : Pavement Parameter Comparisons, p. 19.

Table 6(a): Expert Views on RTA Valuation.

Element	Thickness (mm)			Life (years)				Residual Value (%)			
	SA CL	BARA	Opus	SAC L	BARA	Opus		SAC L	BARA	Opus	
						Pre-1962	Post-1962			Pre 1962	Post 1962
Runways – Asphalt Wearing Course											
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
Runways – Concrete Wearing Course											
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
Taxiways											
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
Aprons											
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 was that SACL does not require a depreciation charge to allow for physical deterioration of the sub-grade component of its RTAs. Nor is a depreciation allowance required for physical deterioration of the base course of RTAs 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 was 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.

In its response to the draft decision, Maunsell McIntyre accepted the majority of the points made in the Opus report. This had the effect of reducing the ORC of the RTA assets and the depreciation charge and consequently increasing the DORC value. The ORC was reduced by \$39.5m and the ODRC value increased by \$4.4m. The Commission regards these adjustments as appropriate.

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:¹⁷⁵

Table 6(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

¹⁷⁵ Ibid., Table 3 : Comparison of Cost Allowances, p. 13.

* 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 1per cent increase in the allowance. 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.¹⁷⁶

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 per cent to the costs (ie \$100M).¹⁷⁷

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.¹⁷⁸

The Commission's draft decision noted 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 fell within that range, the Commission did not regard as unreasonable the rates SACL has used in compiling the ODRC asset valuation.

SACL's response to the Commission's draft decision adjusted the allowance for other costs in the light of the Opus view that finance costs may in some circumstances have been underestimated. The adjustment added \$19.0m to the ORC valuation and \$7.5m to the ODRC valuation. The Commission does not object to these adjustments.

6.6 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.

¹⁷⁶ Ibid., p. 70.

¹⁷⁷ Ibid., p. 13.

¹⁷⁸ Ibid., p. 14.

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. Therefore, the approach that the Commission took in the draft decision was to recommend changes to SACL's proposal in those cases where Rider Hunt and Opus are in agreement. In cases where Opus and Maunsell McIntyre held similar views the Commission did 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.

The Commission's draft decision was that a more appropriate aeronautical asset base should be determined by SACL and submitted to the Commission, and that the effect of this revised valuation should be reflected in a revised depreciation charge.

6.7 Commission decision

The Commission's decision is that SACL, through its advisers Maunsell McIntyre, has made appropriate adjustments to the asset base and depreciation charge. The effect of these changes implies an opening ODRC asset valuation of \$951.2m and a depreciation charge of \$35.3m for the 2000/2001 financial year.

■ Chapter 7: The Necessary New Investment Criteria Under Direction No. 18

7.1 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.¹⁷⁹

Following the submission of the 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.

¹⁷⁹ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 27.

7.2 The legal framework

7.2.1 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 SACL 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 No. 18(2).

Direction No. 18:

Direct(s) the Australian Competition and Consumer Commission (ACCC), 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...¹⁸⁰

As discussed in chapter 2, the Direction appears to relate to new investment that may be associated with price increases, rather than restricting the Commission to considering separately price increases associated with new investment. In the current case, SACL has proposed price increases that are in part associated with new investment but are also associated with a re-assessment of asset values and a move from pricing based on a single till to a dual till. The criteria set out in paragraph (2) of Direction No. 18 are to be used as the framework for assessing the component of the proposed price increases associated with the new investment.

7.2.2 “Necessary new investment”

BARA argues that ‘it is also necessary for the Commission to assess the timing of new investment expenditure’.¹⁸¹ It then refers to the Commission’s decision in October 2000 in relation to Melbourne Airport.¹⁸²

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’.¹⁸³ This therefore requires the Commission to ascertain the component of the expenditure on the SA2000 project and associated capital works 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 investments made by SACL since 1 July 1998 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

¹⁸⁰ Direction No. 18, June 2000.

¹⁸¹ Board of Airlines Representatives of Australia, 2000b, op. cit., pp. 72-73.

¹⁸² See, Australian Competition and Consumer Commission, October 2000m, *Australia Pacific Airports (Melbourne) Pty Ltd: Range of Projects New Investment Decision*.

¹⁸³ Board of Airline Representatives of Australia, 2000b, op. cit., p. 79-80.

1998 did not determine the question of the costs related to the SA2000 project and other capital expenditure, this would require classification of the whole project as “new”.

However, classifying the entire capital expenditure after 1 July 1998 as new implies that, to be consistent with the Commission’s guideline on NNI, the costs are limited to those which lead to ‘...a change in fixed durable inputs that does not simply seek to replace natural degradation of capital’.¹⁸⁴ This necessarily entails adopting a related assumption: that prices in existence prior to the works commencing are sufficient to maintain assets existing at that time. Included in this assumption is that existing aeronautical charges are sufficient to allow for the replacement of the aeronautical assets. As the discussion regarding the dual till elsewhere in this decision demonstrates, the assumption of efficient existing prices does not appear to hold in the case of Sydney Airport. Consequently, the Commission does not regard the approach set out in its guideline on NNI to be identical to the notion of ‘new’ investment applicable at Sydney Airport.

The Commission has also considered whether the capital expenditure carried out by SACL can be considered to be ‘investment’ and ‘necessary’. The Commission’s concept of investment was discussed in the Commission’s guideline on NNI. The term ‘investment’ was generally defined as an increase in fixed durable inputs or capital. The Commission understands that the expenditure in question in SACL’s proposal relates to expenditure on capital items, such as buildings and aprons, and related costs and would therefore agree with the Commission’s understanding of ‘investment’. Regarding whether the capital investment made by SACL after 1 July 1998 was ‘necessary’, the Commission’s view is that there are a number of indicators that suggest that this was the case. They include the need to expand facilities at the airport to allow for growth in traffic over the next few years and to provide the expansion of the airport in time for the Sydney Olympics.

7.3 Commission assessment

7.3.1 Introduction

The issue of new investment has arisen because the assets under discussion were the subject of a notification to the Commission by the FAC in the first half of 1998. The FAC’s proposal comprised a restructure of prices in the first year and, over the course of three years, a series of price increases to allow for new investment. For the purposes of this discussion, the capital investment that took place subsequent to 1 July 1998 will be termed New Capital Works’. SACL, who took over control of Sydney Airport from the FAC on 1 July 1998, classified the New Capital Works as the SA2000 project, Parallel Capital Works and Other Works. SACL’s December 1999 proposal was similar to the FAC’s proposal to the extent that it separated assets existing at 1 July 1998 from the budgeted cost of the New Capital Works. However, SACL’s September 2000 submission did not make this distinction and was based on a valuation of all aeronautical assets as at 1 July 2000, regardless of their construction date.¹⁸⁵

SACL, in a submission to the Commission’s draft decision, states that:

¹⁸⁴ Australian Competition and Consumer Commission, 2000i, op. cit., p. 9.

¹⁸⁵ Sydney Airports Corporation Ltd, 2000c, op. cit.

Subject to the qualification outlined below (regarding quality of service), SACL believes that the ACCC has generally taken a reasonable and pragmatic approach in its assessment of the necessary new investment (NNI) criteria. It has also fairly represented SACL's position both from an overview and individual criteria perspective.¹⁸⁶

In its submission to the draft decision, BARA made the criticism that:

In its Draft Decision, the Commission has not at any stage assessed whether and to what extent SACL's post July 1998 investment constitutes 'new investment' as interpreted by the Commission in its guideline...Furthermore, there is no explanation in the Draft Decision as to why the Commission has departed from its previous interpretation of 'new investment', as expressed in its own published guidelines and previous airport decisions.¹⁸⁷

Implicit in the Commission's interpretation of the NNI provisions (expressed in the April 2000 position paper) is that charges will be increased above some level that was previously sufficient to allow for the ongoing maintenance of the aeronautical asset base. It is from this assumption that the Commission is able to make conclusions regarding, for example, the exclusion of costs to the extent that they replace assets. In the case of Sydney Airport, however, concerns have been raised regarding whether, amongst other things, the rate of return on assets and the rate of depreciation were appropriate. In the context of reviewing the charges that existed at 1 July 1998, SACL elected to move to a dual till pricing methodology and reviewed asset values and depreciation rates. This review, discussed elsewhere in this decision, indicates that prices in existence at 1 July 1998 were not efficient and it therefore follows that an alternative approach to the assessment of efficient investment is appropriate. This situation compares with that of the privatised core-regulated airports where a provision for ongoing maintenance was allowed for in the setting of X values for the CPI-X regime.

In the Commission's view the goal of assessing new investment proposals is to establish a set of efficient prices that allow appropriate incentives for airport operators to undertake capital investments in the future. There may however be a number of approaches to estimating the efficient cost of that investment and the extent to which it can justify price increases. In the case of SACL, the Commission has assessed the building block methodology in this decision and approved of prices that are efficient as at 1 July 2000. It follows that *if* the Commission's assessment had started with a set of efficient prices as at 1 July 1998 and had added onto those prices the efficient cost of the post 1 July 1998 capital expenditure *then* the resulting prices should be the same. In this light, the Commission considers that its use of the building block methodology has entitled it to assess the matters referred to in Direction No. 18. That assessment is set out in the following sections.

7.3.2 (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

¹⁸⁶ Sydney Airports Corporation Ltd, 2001a, op. cit., p. 56.

¹⁸⁷ Board of Airline Representatives of Australia, 2001a, op. cit., p. 31.

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.¹⁸⁸

In relation to the appropriate measure of costs, the BARA submission to the Commission's issues paper 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.¹⁸⁹

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. 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, [i]n theory, efficiently incurred historic costs and replacement costs should be the same at the time of construction'.¹⁹⁰

In responding to this criterion SACL notes that an overview of the assets comprising the New Capital Works and the associated costs were provided at section 5.3 of the proposal. Section 6.1 of the proposal and the financial models provided a revised valuation of capital expenditure undertaken over the period 1 July 1998 to 30 June 2000. The revised cost of this capital expenditure is \$679 million, comprising assets that provide both aeronautical and non-aeronautical services. A proportion of this amount was subsequently allocated to aeronautical services using SACL's activity-based costing system.

Regarding service innovation, SACL referred to section 7.3.1 of the 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 proposal which describes forecast operating expenses.

The Commission's draft decision was 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.

In its submission to the Commission's draft decision, BARA reiterates its view that the cost and the plans of the investment since 1 July 1998 need to be separately identified in order for the Commission to make an assessment against this criterion. BARA also states that:

¹⁸⁸ Australian Competition and Consumer Commission, 1999c, op. cit.

¹⁸⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 81.

¹⁹⁰ Id.

the Commission is required by the regulatory framework to make explicit the costs of the new investment.

More specifically, the Commission has failed to consider the efficient cost of the new investment. By only considering an ODRC valuation of what has been built, the Commission has not taken into account an alternative design and construction process. BARA's initial submission identified the prospect of an alternative expansion at Sydney Airport at a lower cost with an end product more conducive to airline operations.¹⁹¹

Comments regarding an alternative design in BARA's initial submission appear to refer to a statement regarding service quality and the regulatory framework:

BARA members do not believe that the service quality outcomes achieved by the SA2000 Project justify SACL's proposed price increase, on a value for money basis. BARA contends that if the airlines had been advised that they would have to contribute to the cost of the Project, they would have insisted on a product which produced a higher quality of service for the airlines and their passengers. BARA contends that the FAC/SACL could have produced a product more suited to the airlines' needs at a significantly lower cost, but instead chose a design which significantly enhanced retail facilities.¹⁹²

BARA also commented in the context of the NNI provisions that:

Had airlines been advised that the increased retail facilities would not contribute to the total cost of the Project and that the airlines would bear the full cost of the new aeronautical assets, they would have developed, promoted and supported an alternative design, involving no expansion of retail facilities, which was as cost efficient as possible and more conducive to airline operations.¹⁹³

To the extent that BARA fundamentally disagrees with the application of a dual till in the context of airports it also disagrees with airlines bearing '...the full cost of the new aeronautical assets...'. BARA's argument appears to be that had the airlines been aware that they would be required to pay for the full cost of aeronautical assets they would not have agreed to the design proposed. SACL's approach has been to separately identify the cost of aeronautical assets and incorporate this in a charge to airlines.

The Commission's view is that concerns raised by BARA represent views of the dual till methodology and of the appropriateness of cost allocation rules. Regarding dual till, the Commission has elsewhere in this paper discussed the efficiency benefits of adopting a dual till approach. Regarding cost allocation, the Commission's view, as discussed in Chapter 9, is that appropriate cost allocation rules are in place that allow for a separation of the costs attributable to aeronautical services to be separated from other services.

The issue of user support for the new capital works at Sydney Airport is discussed at 7.3.4, below.

7.3.3 (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.

¹⁹¹ Board of Airline Representatives of Australia, 2001a, op. cit.

¹⁹² Board of Airline Representatives of Australia, 2000b, op. cit., p. xiii.

¹⁹³ Ibid., p. 83.

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.¹⁹⁴

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'.¹⁹⁵ 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 11 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.

In responding to the Commission's draft decision, BARA argues that:

...the Commission has failed to consider the criteria in paragraph 2(b) of Direction No. 18. This criteria requires consideration of the **relationship** between the increase in aeronautical charges and the costs of the new investment. The Commission's Draft Decision does not consider that relationship... the Commission's failure to specifically consider the relationship between aeronautical charges in respect of new investment and the costs (including rate of return) of the new investment means that it has not specifically addressed the very clear and pronounced interdependencies of the new investment.¹⁹⁶

Given that this decision makes an assessment based on a complete reassessment of all aeronautical assets and that that reassessment enables the objectives of the assessment of the increases resulting from new investment to be achieved, the Commission's view is that the identification of the precise relationship between the New Capital Works and the proposed price increases in SACL's proposal is not of great importance. The Commission has effectively assigned an efficient value to all aeronautical assets by determining an efficient level of charges for aeronautical services. Even if the Commission, by applying the principles set out in its guideline, were to establish what price increases should flow from the New Capital Works the question would remain as to the base to which these increases are applied. The appropriate base would be represented by a set of efficient prices as at 1 July 1998. As discussed elsewhere in this decision, the prices charged by SACL as at 1 July 1998 cannot be assumed to be efficient prices. It follows that if the Commission determined efficient prices as at 1 July 1998 and increased these prices for the efficient cost of the New Capital Works, then the result would be the same as determining efficient prices as at 1 July 2000.

Therefore, the relationship between cost of the new investment and the price increases in this application is encompassed in the broader assessment of aeronautical charges. The cost of the New

¹⁹⁴ A copy of the relevant extract from a SACL letter that discusses the necessary new investment criteria is available from the Commission upon request.

¹⁹⁵ Board of Airline Representatives of Australia, 2000b, op. cit., pp. 82-83.

¹⁹⁶ Board of Airline Representatives of Australia, 2001a, op. cit., p. 33.

Capital Works only comprises a part of the proposed increases. As discussed elsewhere in this decision (see, for example, chapter 12), where SACL's proposed price increases exceed the efficient cost of providing aeronautical services the Commission has made adjustments.

7.3.4 (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 its 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 that are already committed and/or completed'.¹⁹⁷ The BARA submission to the Commission's issues paper 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.

BARA's view is that capacity has been increased but disputes whether the result has been optimal for the airlines. The BARA view is partly based on statements made by the former operator of Sydney Airport, the FAC, to the Parliamentary Standing Committee on Public Works in 1997.¹⁹⁸ The Committee's report indicates that the FAC considered pricing its terminal upgrade on the basis of a single till:

It was stressed by the FAC, that without retail outlets, the only revenue stream remaining would be increased aeronautical charges. Retail sales are therefore the means by which charges are kept low and the cost of air travel is contained.¹⁹⁹

The report also records that:

IATA advised the Committee that it would support a development which is cost effective and one in which all airline charges are transparent. IATA has been assured by the FAC that current aero charges are not expected to increase and that funding of the proposed development will be recovered from the growth in the number of aircraft movements and growth in retail revenue. This was confirmed by the FAC.²⁰⁰

BARA's primary contention is that it provided its support to the works only on the basis of the FAC's assurances that the cost of the new international terminal would be funded by growing traffic and by revenues from retailing, and that as a result no increases in aeronautical charges would be necessary. Further it argues that these assurances are evidence of the interdependencies between

¹⁹⁷ A copy of the relevant extract from a SACL letter that discusses the necessary new investment criteria is available from the Commission upon request.

¹⁹⁸ The Parliament of the Commonwealth of Australia, Parliamentary Standing Committee on Public Works, *Report relating to the proposed Sydney Airport: International Terminal – Olympic Upgrading*, 1997.

¹⁹⁹ *Ibid.*, p. 31.

²⁰⁰ *Ibid.*, p. 30.

aeronautical and retail revenues at Sydney Airport, and that the airlines would only have supported a less costly project that better met the airlines' needs.

In arriving at its decision, the Commission has taken account of the impact of traffic growth going forward and has adjusted SACL's proposed prices, as described in Chapter 12. SACL has used an activity based costing system to allocate the cost of operating the airport between the various activities including aeronautical and retail in which case it is not obvious that the cost of aeronautical activities is greater than it would have been in the absence of retail activities.

The Commission's experience in assessing NNI applications from airport operators has been that user support is difficult to determine in retrospect. The Commission notes however that BARA does not appear to object to the New Capital Works itself but rather objects to being subject to associated unanticipated price increases. There may indeed be an economic incentive for users to express disagreement to projects or their associated costs in order to avoid increased aeronautical charges. The Commission recognises that BARA's disagreement regarding the increased aeronautical charges is related to the previous practice of single till pricing at Sydney Airport.

It is therefore the adoption by SACL of a dual till, rather than a single till, that appears to be the essence of concerns expressed by airlines. The quotes from the Parliamentary Standing Committee report indicate that *sales* and *revenues* from retail activities may be taken into account in determining charges for aeronautical services. Under a dual till approach however it is only the *costs* related to retail activities that are taken into account when determining charges for aeronautical services. Elsewhere in this decision the Commission has set out its reasons for considering dual till to be a reasonable approach to the pricing of aeronautical services at Sydney Airport. The Commission understands that BARA's disagreement with SACL's application of the dual till implies that the users represented by BARA do not support the charging changes proposed by SACL.

7.3.5 (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. 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 refers to section 7.5 of its 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 proposal. SACL also claims that :

Material productivity improvements have been realised and are expected to continue as a result of the additional capacity provided through recent investment. Details of the capacity expansions are provided in section 5.3 of the December 1999 Draft Proposal. In addition to the international terminal and apron expansion through the SA2000 project, taxiway enhancements

have reduced congestion and taxiing times for aircraft, the expansion of airside roads has improved connection times between terminals etc.²⁰¹

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.²⁰²

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.²⁰³

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 7.3.2, above, the Commission is able to draw some conclusions from the broader analysis carried out in elsewhere in this decision. As a result of the broader analysis the Commission's draft decision was 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 was that sufficient control has been exercised over inefficient investment.

In its submission in response to the draft decision, BARA comments that:

...BARA disagrees that the Commission has properly considered the criteria in paragraph (2)(d). This criteria specifically requires the Commission to consider the contribution of the new investment to productivity improvements.²⁰⁴

The Commission has only limited information upon which to assess the productivity improvements that flow specifically from the New Capital Works. Although this specific measurement is unavailable, the Commission has factored in productivity improvements by adjusting for assumed savings in operating expenses and asset optimisation. Further, the New Capital Works have led to an increase in the capacity of aeronautical services offered at Sydney Airport. Under such circumstances measurements of the capital productivity of the airport may indicate a decrease. However, the productivity criterion refers to improvements to productivity *at* the airport which would include productivity improvements experienced by users, including airlines and passengers. Such improvements by users can be expected where a facility's capacity is expanded to relieve or avoid congestion.

²⁰¹ A copy of the relevant extract from a SACL letter that discusses the necessary new investment criteria is available from the Commission upon request.

²⁰² NSW State Chamber of Commerce, *Submission re: Sydney Airport*, December 2000.

²⁰³ Board of Airline Representatives of Australia, 2000b, op. cit., p. 83.

²⁰⁴ Board of Airline Representatives of Australia, 2001a, op. cit., p. 35.

7.3.6 (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’.²⁰⁵

SACL has referred to section 2 of its proposal for a discussion of demand management issues. Section 8 of the 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.

7.3.7 (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 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...

²⁰⁵ Ibid., p. 96.

There is considerable evidence that the quality of service delivered by SACL is below that achieved by other major airports in Australia.²⁰⁶

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. In contrast, SACL argues 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...²⁰⁷

In its draft decision the Commission noted that there was 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.

In its submission to the Commission's draft decision, SACL argues that:

...the ACCC relies too heavily on airline references to their own views on quality outcomes. In this context, the ACCC should be alert to the strong commercial and legal incentives for a grouping of airlines to respond to ACCC quality surveys in ways that are influenced by factors strictly extraneous to quality performance alone. These incentives come from the ability to subsequently quote themselves in relation to regulatory processes and in the context of Federal Court action taken by certain airlines in a related area.

....

In summary, SACL has provided evidence of strong quality outcomes from credible third party sources including passengers, the NSW State Chamber of Commerce, peer Australian airports and the world's senior airport body. In contrast, the airlines have presented only their own unsubstantiated assertions. Accordingly, SACL does not believe that "the situation regarding the *quality* of aeronautical services is not unequivocal".²⁰⁸

Despite the assertions of SACL the Commission is of the view that the airlines have raised genuine concerns regarding the quality of service offered at Sydney airport. These concerns were in part set out in Chapter 12 of BARA's response to the Commission's issues paper.²⁰⁹ The Commission maintains its view in this decision that the experience of airport users regarding the quality of services at Sydney Airport has been varied (particularly during the construction process) but that, on balance, the quality of service is likely to be increased by the New Capital Works.

²⁰⁶ Ibid., pp. 83,84

²⁰⁷ Sydney Airports Corporation Ltd, 1999b, op. cit., p.145.

²⁰⁸ Sydney Airports Corporation Ltd, 2001a, op. cit., p. 56.

²⁰⁹ Board of Airline Representatives of Australia, 2000b, op. cit.

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:

- the Australian Airports Association award "Major Airport of the Year" in November 2000;
- the 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
- 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.²¹⁰

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 10.

7.3.8 (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.

²¹⁰ Ibid., p. 101.

In a letter to the Commission, SACL claims 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.²¹¹

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.

7.4 Commission 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 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.

In this context the Commission assessed the new investment component of SACL's proposal more as 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's view is that the difficulties of applying the necessary new investment criteria in the current case 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.

In conclusion, the Commission is of the view that the price increases proposed by SACL are unlikely to reflect the incorporation of new investment costs that exceed the efficient costs, and that the increases approved by the Commission in this decision reflect an efficient level of new investment costs that more properly enable the objectives of the regulatory regime to be achieved.

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

²¹¹ Extract from letter from Don Huse, Chief Financial Officer, SACL to the Commission dated 16 November 2000.

■ Chapter 8: Land Valuation

8.1 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.²¹²

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 the opportunity cost valuation proposed by SACL and historic cost. This chapter reviews SACL's approach before considering each of these valuation methods and outlining the Commission's preferred approach.

8.2 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

²¹² Australian Competition and Consumer Commission, 1999a, 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.²¹³

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.

8.3 Opportunity Cost

8.3.1 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, the opportunity cost of land is itself never directly observable, as the market value represents the land’s highest value use (as opposed to its *second* highest value use). It is therefore not 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.

8.3.2 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

²¹³ Sydney Airports Corporation Ltd, 1999b, op. cit. Executive Summary, p. ix.

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 proposal.²¹⁴ 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 and increases the potential for X-inefficiency.

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.

Responses to the Commission's draft decision were mixed. IATA re-iterates its view that the opportunity cost of land at Sydney Airport is zero, while BAC argues that the opportunity cost is a market value.

8.3.3 Application of the opportunity cost principle

Whilst opportunity cost is in principle an appropriate approach to valuing land, its application is not straightforward. As already noted, opportunity cost is never directly observable. There are therefore several possible approaches to estimating the opportunity cost of land, of which SACL's method may be 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. BARA argues that SACL's valuation is not an estimate of the opportunity cost of land at all, rather an estimate of the replacement cost. SACL itself recognises that a range of land valuation approaches can be adopted.

There are essentially two ways to approach the estimation of opportunity cost from the perspective of an investor:

- I. from a 'greenfields' or market entry perspective, the opportunity cost of land would be the cost to a new market entrant of acquiring and developing land (ie, purchase price plus holding costs) in order to replicate the facilities at Sydney Airport, at an equally convenient but alternate location to Sydney Airport.
- II. From a 'brownfields' or market exit perspective, the opportunity cost would be the cost of forgoing the opportunity to put the land in next best alternative use. This is the price that a developer would be willing to pay for the land (ie, market value of land and improvements in next best use, less demolition costs). This is effectively the same as the 'scrap value' of land (ie, the avoidable cost to the investor).

Both approaches, and indeed any estimate between the two, are potentially valid from an economic pricing perspective.²¹⁵

²¹⁴ 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.

²¹⁵ Sydney Airports Corporation Limited, 2001a, op. cit., p. 58.

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 SACL's proposals against 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 matters are based on 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 8.5.

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.

8.3.4 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'.²¹⁶ It argues that its valuation of land provides an efficient pricing signal regarding the continuing use of land as an airport.

In 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. Professor Kahn, in his advice to SACL on this issue, notes that this argument may apply when considering the signals sent to the airport operator for use of the land. He argues, however, that this argument does not overcome another reason 'for prices recovering those opportunity costs – to "give efficient signals to buyers"'.²¹⁷ The Commission's views on the price signals sent to users is discussed in section 8.5.

²¹⁶ Sydney Airports Corporation Ltd, 1999b, op. cit., p. x.

²¹⁷ Kahn, 2001b, op. cit., p. 5. This paper is available on the Commission's website at <<http://www.accc.gov.au>>.

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 arguments focus on the impact of price on supply-side decisions made by SACL. In general, these arguments only apply 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. As noted in section 8.3.3, SACL has recognised that a range of efficient valuations is possible. SACL has characterised each of these as 'opportunity cost', and its own as a market entry-type (green-fields) valuation. It is not clear, however, that SACL's valuation is necessarily an opportunity cost approach. As BARA argues, it appears to be a replacement cost valuation; while NECG suggests that the efficient replacement cost would rather be based on the cost of an optimally sized, optimally located airport providing the same services as SACL. NECG's point is discussed further in section 8.3.5.

NECG's advice 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.²¹⁸

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 SACL's valuation approach in the context of relocation of the airport.

²¹⁸ Network Economics Consulting Group, 2000c, op. cit., p. 8.

8.3.5 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.²¹⁹*

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 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.

²¹⁹ Pitchford, R., *Sydney Airport Land Valuation: An Assessment*. A copy of this report is available on the Commission's website at <<http://www.accc.gov.au>>.

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.²²⁰

An efficient valuation methodology would then involve adjusting this DORC valuation for third party effects mentioned above.

Thus, NECG argues that the constraint on asset values inherent in DORC - ie, that the net present value (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 green-field 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 beyond the scope of this decision.

SACL has proposed an estimate of the market valuation of the land (plus holding costs) which reflects the value of the site as an airport, rather than in an alternative use. Its assessment does not take into account factors external to SACL. Furthermore, the approach does not take into account all of the private costs and benefits facing SACL in considering a decision to relocate. Because of these reasons the Commission is not persuaded that SACL's proposal can be considered a measure of opportunity cost.²²¹

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

²²⁰ Network Economics Consulting Group, 2000c, op. cit., p. 13.

²²¹ This is consistent with the arguments of BARA, who suggests that 'SACL has attempted to estimate the replacement cost (ODRC) of the land rather than opportunity cost'; see Board of Airline Representatives of Australia, 2000b, op. cit., p. 122.

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.

8.3.6 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 the replacement value of land. SACL suggests that if current aeronautical charges 'do not reflect the full private cost a new entrant would face in developing that particular airport, other alternative airports will not be able to compete on an equal footing'.²²² 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 green-field site. In general, limitations on effective competition to SACL are more likely to stem from environmental barriers to entry, and economies of scale and scope associated with airport operation, than from location.

8.3.7 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.

In the draft decision, the Commission argued that,

[o]verall 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.²²³

SACL, in its response to the draft decision, disagrees with the Commission's statements, arguing that 'the future development of the site is largely at SACL's discretion'²²⁴, while Perth Airport argues that the Commission's approach to the valuation of land is not representative of "the true opportunity cost associated with the land".²²⁵ SACL, Perth Airport and Melbourne Airport all

²²² Sydney Airports Corporation Limited, 2001a, op. cit., p. 63.

²²³ Australian Competition and Consumer Commission, February 2001n, *Sydney Airports Corporation Ltd Aeronautical Pricing Proposal – Draft Decision*, p. 109.

²²⁴ Sydney Airports Corporation Limited, 2001a, op. cit., p. 64.

²²⁵ Perth International Airport, op. cit.

suggest that SACL will face distorted incentives for land use if SACL's proposed valuation approach is not adopted.

The Commission maintains its position that existing legislative provisions in the *Airports Act (Cth) 1996* limits the scope for SACL to devote aeronautical land to non-aeronautical purposes.

8.3.8 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.

SACL's response to the draft decision argues that '[n]ot all future investment will (or should) involve new land acquisitions'.²²⁶ The Commission notes, however, that non-land capital costs are also addressed by the provisions of Direction No. 18. Land and non-land assets are thus treated consistently in new investment decisions. Incentives regarding other investment – for example, investment designed to reduce operating costs – are catered for elsewhere in the pricing framework. The Commission's view is that SACL has ample incentives to invest in aeronautical assets, particularly for the expansion of capacity, under this decision.

8.3.9 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 argues 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. The Commission considers that there is a strong case to suggest that SACL's approach overstates the opportunity cost of its land.

SACL argues 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.²²⁷

²²⁶ Sydney Airports Corporation Limited, 2001a, op. cit., p. 65.

²²⁷ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 40.

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.

8.4 Historic Cost

8.4.1 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 approach *vis a vis* SACL's proposals. The second is implementation of an historic cost approach. The third is land valuation and congestion management.

8.4.2 Advantages of an historic cost approach

The discussion above concludes 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 concludes that such an assessment would be highly 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 generally readily identifiable. Records on land purchases document the amounts paid. This means that the approach is 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, the United Kingdom.

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.²²⁸

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.

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.²²⁹

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, related to the supply of aeronautical services, is that the prices resulting from an historic land valuation may send poor signals for the efficient use of land. The second, related to the demand for aeronautical services, is that historic cost may also limit the airport operator's ability to effectively manage congestion. Congestion management is discussed in section 8.5.

8.4.3 Signals for efficiency

The Commission has assessed the implications of adopting an historic cost valuation of land against the signals for the efficient use of land in assessing SACL's proposals. To assist in this the Commission sought additional advice from NECT.²³⁰

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, the historic cost and the 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

²²⁸ Australian Competition and Consumer Commission, 1999a, op. cit., pp. 41-42.

²²⁹ Australian Competition and Consumer Commission, 2000b, op. cit.

²³⁰ Network Economics Consulting Group, December 2000d, *Sydney Airport Revised Draft Aeronautical Pricing Proposal – Final Report*.

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 Badgery'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.

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.²³¹

In summary, the Commission considers that historic cost valuation of land will give an equivalent outcome to SACL's proposed valuation in relation to the decision to operate/not operate or relocate the airport. The Commission also considers that through the provisions of Direction No. 18, SACL faces ample incentives to efficiently expand its aeronautical capacity.

8.4.4 Implementation

Use of an historic cost approach to valuing land raises three 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. The third issue, particular to SACL, relates to gaps in the information on the purchase cost of land.

Indexation

Turning first to indexation, under a real rate of return on capital approach, the historic cost should be indexed forward. Alternatively, a nominal rate of return could be applied 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 the draft decision was the Consumer Price Index (CPI). The attraction of the 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.²³²

²³¹ Network Economics Consulting Group, 2000c, op. cit., pp. 10-11.

²³² Australian Competition and Consumer Commission, 2000b, op. cit.

In its response to the draft decision, SACL argues against the use of CPI indexation on the grounds that:

- the objective is to determine the regulatory asset base, rather than adjust over time a regulatory asset base that is already representative of the market value of the SACL's assets; [...]
- the objective is to value an investment made by Sydney Airport (in land) rather than to value an investment in Sydney Airport by a shareholder; [...] and
- the index is to be used to estimate a component of Sydney Airport's assets, rather than an investment in the entire corporation.²³³

Accordingly, SACL advocates the adoption of a specific land value index as an alternative to CPI. Similarly, Northern Territory Airports argues that indexing by CPI will 'provide valuations that differ markedly from current market values'.²³⁴ A practical limitation of this approach is that there are no published land value indexes. More fundamentally, as noted in the draft decision, 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.

Furthermore, given the unique characteristics of land, indexation in line with CPI inflation is sufficient for regulatory purposes. The fact that land does not depreciate, and therefore does not need replacement, ensures that including land in the regulatory asset base at historical cost and indexing it forward at CPI is high enough to maintain shareholders' financial interests in SACL, meet ongoing debt servicing obligations and maintain its physical assets.²³⁵

Landfill

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 excludes them from the valuation of land. These classifications warrant consideration. Seawalls are a depreciating asset, that ultimately require replacement. Furthermore, in replacing these assets, it may be the case that real replacement costs change over time, and/or that more or 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'.²³⁶ Given these characteristics, the Commission believes that landfill should be included as a component of land. This

²³³ Sydney Airports Corporation Limited, 2001a, op. cit., p. 71.

²³⁴ Northern Territory Airports, *ACCC Draft Decision on SACL Aeronautical Pricing Proposal*, March 2001.

²³⁵ For a more detailed discussion of this issue, see Independent Pricing and Regulatory Tribunal of New South Wales, *Rolling Forward the Regulatory Asset Bases of the Electricity and Gas Industries*, January 1999, pp. 9-11.

²³⁶ Board of Airline Representatives of Australia, 2000b, op. cit., p.126.

reclassification would increase SACL's 1 July 2000 land valuation to around \$705m.²³⁷ In estimating the historic cost of landfill, historic *construction* costs rather than purchase costs are included.

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 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 ORC valuations of seawalls, which was \$160.4m as at 1 July 1998. This 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 its response to the draft decision, SACL notes that some costs associated with reclamation have not been recognised as 100% aeronautical. The Commission has allowed for this in calculating historic cost in this decision. While BARA expresses concern that reclaimed land is assumed to be 100% aeronautical, it is the Commission's view that in a material sense this approach is not unreasonable.

Additional Information

Prior to the draft decision, SACL advised the Commission that the historic land cost information provided was incomplete. Consequently, for the purposes of the draft decision, the Commission included a \$100m contingency in the valuation of aeronautical land at Sydney Airport.

BARA argues that 'the contingency is arbitrary and unverifiable'.²³⁸ Similarly, SACL argues that the inclusion of a contingency undermines the Commission's approach to land valuation. Accordingly, in this decision, the Commission has acted to improve its calculation of the historical cost of land.

In its response to the draft decision, SACL provided further information regarding the area of land associated with particular purchases. The Commission has used square metre rates based on this information to calculate the historic cost of the remaining land area. The contingency has been correspondingly removed from the land value calculation.

BARA also notes that the land value calculation in the draft decision included costs relating to the Cooks River and General Holmes Drive that were contained within the Maunsell McIntyre valuation of fixed assets.²³⁹ The Commission has excluded these costs from the calculation of land value in this decision.

8.4.5 Conclusion

The above discussion highlights a number of practical advantages in using historic cost in preference to opportunity cost for the purposes of valuing land. Furthermore, the Commission considers that the

²³⁷ While this figure includes the value of landfill, it excludes the value of seawalls.

²³⁸ Board of Airline Representatives of Australia, 2001a, op. cit., p. 42.

²³⁹ Ibid., p. 43.

adoption of such an approach will result in outcomes that are at least as efficient as those under SACL's proposal.

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.

8.5 Land Value and Congestion

8.5.1 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.

8.5.2 Views of Interested Parties

SACL argues 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).²⁴⁰

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 the view that 'the policy debate is not about whether to replace Sydney Airport but how best to provide further airport capacity for Sydney'.²⁴¹ 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,

²⁴⁰ Sydney Airports Corporation Ltd, 1999b, op. cit., p. 43.

²⁴¹ Australia Pacific Airports Corporation, 2000b, op. cit., p. 8.

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.²⁴²

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.

BARA obtained advice from Professors Michael Crew and Paul Kleindorfer on the issue of land value and congestion, who argue that SACL's proposal overlooks the fact that land value 'is not **price determining** but rather is **price determined**'.²⁴³ Similarly, Professor Kahn, in his advice on behalf of SACL, notes that 'the sale price of the airport, when it comes to be privatised, will be *determined* by the level of those charges'.²⁴⁴

8.5.3 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.

Congestion may be addressed a number of ways. One approach is through increased capacity which, at Sydney Airport, would be assessed under the necessary new investment provisions set out in Direction No. 18. It may also be possible to address congestion through adjustments to price levels.

The Commission has recognised the fact that efficient price signals to airport users must reflect a cost associated with land. In this decision, the Commission is accepting a land value at Sydney Airport which it considers is within the range of efficient outcomes and which is significantly greater than previous decisions relating to pricing for the FAC. Accordingly, it remains to be seen whether, at these new price levels, congestion remains an issue at Sydney Airport. It should also be noted that the existence of congestion *per se* does not necessarily imply that aeronautical charges are too low. Professor Kahn draws attention to this issue:

...any cost assigned to the land higher than ["its value in the next best alternative use"]...incorporated in the airport charges...would, like any other price in excess of cost, inefficiently discourage use of the airport (pars. 26, 27)²⁴⁵

²⁴² Sydney Airports Corporation Ltd, 2000c, op. cit., pp. 43-44.

²⁴³ Crew, M.A. and Kleindorfer, P.R., in the Appendix to *Regulation for Privatised Airports: Single-Till Versus Multi-Till Pricing Methodologies for Sydney Airport*, January 2001, p. i.

²⁴⁴ Kahn, 2001b, op. cit..

²⁴⁵ Ibid., p. 6. The paragraph references relate to evidence provided by Kahn in a case relating to regulated charges at Wellington Airport in New Zealand.

SACL's proposal does not address the implications of a possible *over*-estimate of the opportunity cost of land at Sydney Airport; namely, increases in price above, and restriction of throughput below, socially optimal levels and the generation of monopoly rents to SACL. At a congested facility the optimal solution may involve better use of existing capacity or expansion, rather than higher prices.

Increases in overall price levels without adjustments to the existing price structure may have some impact on congestion, but it does not follow that this is necessarily efficient. SACL 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'.²⁴⁶ 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.²⁴⁷

On the assumption that all increases in aeronautical charges are passed on to end-users, however, traveller demand may be affected by the increased charges. As noted in chapter 4, the strong growth in passenger volumes in response to cheaper airfares offered by recent entrants into the domestic airline industry suggests that many air travellers *are* relatively price sensitive. Furthermore, in off-peak periods the opportunity cost of additional passengers is negligible. This suggests that the marginal cost of extra passengers during these times is low, and below the price level determined on an average cost basis. It follows that time invariant charges may deter some travellers for whom the marginal utility of travelling exceeds the marginal cost; ie there are net welfare losses to society. Simply raising all charges, regardless of whether a passenger is travelling at a congested time or not, may therefore inefficiently suppress demand in off-peak periods.²⁴⁸ It is thus unclear as to whether increasing charges in the absence of other price re-structuring is likely to be efficient. As noted above, expanding capacity or better using existing capacity may be preferable solutions to congestion.

A more effective way of addressing congestion is to restructure prices. In order to efficiently relieve congestion the price changes must provide incentives for airlines to change their scheduling decisions. 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.²⁴⁹

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

²⁴⁶ Sydney Airports Corporation Ltd, 1999b, op. cit., p. xxiii.

²⁴⁷ Impulse Airlines, *Aeronautical Pricing Proposal by Sydney Airports Corporation Ltd*, November 2000.

²⁴⁸ This occurs because the marginal cost of an additional passenger in an off-peak period is likely to be well below the price (average cost) determined under the building block approach.

²⁴⁹ SACL has suggested that airlines have considerable scope to respond to changes in aeronautical prices; see Sydney Airports Corporation Limited, 2001a, op. cit., p. 104. Yet BARA suggests 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'; see Board of Airline Representatives of Australia, 2000b, op. cit., p. 114.

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 improved 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 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 may have some effect on the demand side. There is little likelihood, however, that the new charging structure will provide significant relief from current runway congestion issues. Furthermore, there is no reason to believe further price increases will suppress demand in a way that increases 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 considers that this decision establishes price levels within which SACL has significant flexibility with respect to managing congestion. The most appropriate mechanism for SACL to address remaining congestion issues is through further refinement of its price structure, such as differential peak/off-peak pricing and incentives for use of larger aircraft.

8.5.4 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 the future (see chapter 13 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.

In commenting on the Commission's draft decision, SACL argues that peak-load pricing is a second-order issue. SACL cites Professor Kahn:

If the decision of when and how much additional capacity is to be efficient, users should be confronted with prices reflecting either those short-run congestion costs - rising over time - or, once the expansion of capacity is clearly on the planning horizon, the long-run incremental cost of adding to capacity, as proposed by Sydney Airports Corporation, (pp. 55-57 of its Proposal). And the investment decisions - including their timing - are unlikely to be efficient unless users are indeed confronted with prices reflecting those true incremental social costs, whether short-run or long-run.²⁵⁰

The Commission generally agrees with these arguments. It is crucial to note, however, that the provisions of Direction No. 18 regarding necessary new investment at Sydney Airport facilitate this outcome. Under Direction No. 18, the full costs of new capacity are passed on to airport users. That is, users are faced with prices into which the marginal cost of expansion is incorporated at the time new investment decisions are taken by the airport. The user support criterion, and the Direction more generally, is thus designed such that investment occurs only where it is efficient.

8.5.5 Conclusion

This section assesses SACL's proposal against the objective that airport users receive appropriate signals regarding the efficient use of airport services. It concludes that adjustments to price levels without adjustments to the existing price structure are unlikely to satisfy the objective, and that to effectively address congestion the airport must also 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 the 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 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 decision should be sufficient to address any congestion issues that arise over the next five to ten years when combined with appropriate price restructuring.

8.6 Commission 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

²⁵⁰ Kahn, 2001b, op. cit., p. 11.

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 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 generally readily quantifiable. As such, it is a 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 will continue to consider the issue of land valuation on a case by case basis in future decisions.

The Commission's 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 \$453m, compared to SACL's estimated value of \$705m.²⁵¹

²⁵¹ Land values include landfill.

■ Chapter 9: Allocation of capital costs (assets)

9.1 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 interdependent 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) aeronautical²⁵²
- b) non-aeronautical
- c) common and/or joint²⁵³

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.

9.2 SACL's approach

9.2.1 Existing assets

SACL applied its Activity Based Costing (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.²⁵⁴

The ABC allocation process achieves allocation of the existing cost base amongst both:

- aeronautical or non-aeronautical services; and
- different asset classes, for the purposes of pricing.

Significantly, this second step achieved the allocation of costs into different *aeronautical* asset classes, which correspond to the proposed charging basis.

²⁵² Or more strictly speaking, those costs that will form the cost base for the pricing proposal; not necessarily synonymous with 'aeronautical'.

²⁵³ For the purposes of the discussion that follows, no distinction is made between common and joint costs.

²⁵⁴ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 78.

Following are some notable examples of SACL's allocations, which serve to illustrate the operation of the allocation methodology:

Table 9(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 metage in terminal devoted to aero/non-aero.

9.2.2 New assets

SACL embarked on a substantial new investment program in 1998, primarily involving the SA2000 project. SACL then updated the asset register contained in the original proposal, which had included only those assets as at 30 June 1998. SACL's proposal now 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.²⁵⁵

Remaining as 'new' is \$101.6m 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.

As with the assets existing prior to 30 June 1998, these assets have been allocated using the ABC system, as discussed.

²⁵⁵ Id.

The table below illustrates the bulk of these projects, and how they were allocated amongst aeronautical and non-aeronautical services, and to which asset class/charge. The most significant aero/non-aero allocation of the new capex was a 60/40 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 9(b): Allocation between aeronautical and non-aeronautical services

Project	Allocation (aero/non-aero)	ABC asset code/charge
<i>PCW:</i>		
(Most)	60/40	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 (\$90.4m) 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 were considered non-aeronautical, including the \$34.4m cost of check-bag screening, passenger screening (\$2.6m) and \$8.4m on commercial projects.

In response to the draft decision, SACL notes the Commission's acknowledgment of SACL's understanding of the incentives under dual till to over-allocate costs to the regulated side. SACL comments further on incentive issues:

SACL was acutely aware of this well-known phenomenon when preparing its proposal, and was accordingly aware that the ACCC and customers would focus on the reasonableness of the approach. The existence of direct regulatory scrutiny significantly dampens the incentive to over allocate costs to regulatory activities.

Further, the regulatory process is a costly one for SACL in terms of revenue foregone during the extended decision making process. To the extent that SACL has little control over timing and is

aware that any suspicion on the part of the ACCC that over allocation may be occurring could result in delays, SACL has an incentive to be conservative.²⁵⁶

9.3 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.²⁵⁷

BARA advances that cost allocation is difficult and can be an arbitrary exercise. However, given that SACL has adopted a dual till approach, BARA makes several comments regarding SACL's proposed cost allocation methodology.

BARA sets out principles it considers 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.

In terms of making a detailed analysis of SACL's ABC model, BARA remarks that:

Despite numerous requests, SACL has been unwilling to provide BARA with such data. Without such information BARA is unable to test SACL's Activity Based Costing (ABC) Model of cost allocation.²⁵⁸

BARA notes NECG's comment in its 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;²⁵⁹

In commenting on the impact of Direction No. 22, IATA emphasises that a consequence of the government's direction is that the question of cost allocation becomes more important than under the single till approach it advocates.

Helicopter operators argue that by charging a licensing fee as well as landing charges SACL is essentially charging twice to recover the same costs.

9.3.1 Existing assets

BARA criticises several particular SACL cost allocations in its submission, including roads, fixed plant, and amenities. However, BARA maintains that it is constrained to making only general comments given the lack of information provided.

²⁵⁶ Sydney Airports Corporation Ltd, 2001a, op. cit., p. 77

²⁵⁷ Board of Airline Representatives of Australia, 2000b, op. cit., p. 195.

²⁵⁸ Board of Airline Representatives of Australia, 2001a, op. cit., p. 46

²⁵⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 189.

9.3.2 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's major criticism, however, of SACL's cost allocation approach is in respect to SACL's treatment of its SA2000 international terminal project.

What is clear, however, is that the ABC model is totally inappropriate for allocating the costs of SACL's recent investments under the SA2000 Project. As noted in BARA's initial submission the costs of this project were inflated in order to allow SACL to substantially increase the retail shopping capacity of the airport. Retail space in the terminal was increased by 66% as a result of the expansion. Terminal gates were increased by 17%.

However, under SACL's ABC model about 60% of the costs of the project have been allocated to aeronautical charges. This seems counter-intuitive.

Had airlines been advised that the increased retail facilities would not contribute to the total costs of the project and that airlines would bear the full cost of the new aeronautical facilities, they would have developed, promoted and supported an alternative design, involving no expansion of retail facilities, which was as cost efficient as possible and more conducive to airline operations. BARA considers the cost of this stand alone project would be significantly less than the costs of the SA2000 Project allocated to aeronautical charges.

The appropriateness of examining costs on a stand alone basis is consistent with the Commission's views on cost allocation. The Commission notes:

*'A firm should not earn revenues from the supply of any set of services which exceeds the forward-looking stand-alone cost of providing that set of services.'*²⁶⁰

BARA encourages the Commission to consider evidence of the stand-alone cost of providing the increment in aeronautical capacity under the SA2000 Project.

SACL's approach to allocating the costs of the SA2000 Project may be appropriate if the interdependency between aeronautical and non-aeronautical services made available as a result of the SA2000 Project (particularly retail) is recognised and factored into aeronautical charges. However, the Draft Decision excludes this major interdependency when determining aeronautical charges. If the Decision follows the same approach, it is vital that no more than the stand-alone costs of the aeronautical facilities be allocated to aeronautical charges.²⁶¹

BARA highlights five other projects where it holds contrasting views on the allocation of costs as proposed by SACL.

2nd zone sub-station and HV Option no. 7 upgrade

SACL has allocated the 2nd 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 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

²⁶⁰ Australian Competition and Consumer Commission, 1997o, *Access Pricing Principles - Telecommunications: A Guide*, p. 39.

²⁶¹ Board of Airline Representatives of Australia, 2001a, op. cit., p. 46

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.²⁶²

Noting the incentives for the over-allocation of costs to the aeronautical side of the business, BARA also raises a form of rationality check on the reasonableness of the cost allocation methodology. BARA contends that management submissions to the SACL Board are a useful way of checking the validity of allocations.

9.4 Commission assessment and decision

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. The airport's ability to make decisions regarding allocation 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 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 the efficient allocation of costs, in particular *common* costs. One method of note is the Ramsey-Boiteux method, which essentially allocates common costs in inverse proportion to the product's elasticity. In principle, this approach at least achieves a minimisation of welfare losses. However, as NECG points out on Ramsey pricing in its dual till report:

This rule, while providing an optimal solution is often impractical to apply due to a lack of demand elasticity information....

An alternative approach — and one noted in the Commission's Telecommunications Access Pricing Principles — is an "*equi-proportionate mark-up over directly attributable costs*". This

²⁶² Board of Airline Representatives of Australia, 2000b, op. cit., p. 193-195.

involves measuring the directly attributable costs (directly attributable costs exclude common costs) of each service within the group and allocating the common costs based on each service's proportion of the total directly attributable costs.²⁶³

However, whilst this approach may be relatively neat in its application, it has weaker claims on the grounds of economic efficiency.

As a starting point though, subsidy free pricing based on the following principles is consistent with these economic principles:

- 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.²⁶⁴

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, and are allocated amongst these services.

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 noted that one option is to adopt a simple "rule" of splitting the common costs equally between the activities that drew on them.²⁶⁵ In an airports context, this means that common costs may be allocated as fifty per cent aeronautical and fifty per cent non-aeronautical.²⁶⁶

Despite the difficulties of ensuring a clearly efficient cost allocation, following a review of SACL's ABC system, the Commission concludes that a fair and reasonable the allocation of the airport cost base has been achieved.

BARA's criticism regarding the possibility of the aeronautical costs of the international terminal expansion exceeding its stand alone cost is noted, however it remains an unsubstantiated hypothesis.

²⁶³ Network Economics Consulting Group, 2000b, op. cit., pp. 4-5.

²⁶⁴ 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.

²⁶⁵ National Economic Research Associates, January 1999, *Estimating the Long Run Incremental Cost of PSTN Access: Final Report for Commission*.

²⁶⁶ Australian Competition and Consumer Commission, 1999c, op. cit., p. 22-23.

The Commission remains to be convinced that the largely 60/40 aeronautical/non-aeronautical allocation of common/joint costs does not achieve an appropriate allocation and does not violate the stand alone rule. This conclusion reflects in part the difficulty of determining what a terminal building that served purely aeronautical functions would cost in terms of both capital and operating expenses. It is the Commission's view that it is not obvious that this latter building would cost less than has been allocated to aeronautical functions under the proposal.

The Commission raised the issue of potential double charging of helicopter operators through license fees and landing charges with SACL. SACL advises that generally helicopter operators based at Sydney Airport have a commercial lease of some form of premises and a license over the helicopter pad that is either a part of, or adjacent to, that lease. SACL states that due to space constraints, exclusive leases over pads are not granted. SACL also advises that the license fees are based on property lease guidelines which have their bases in commercial rates for the area under lease. Typically license fees are set at 30 per cent of the rate of the adjacent lease, currently around \$10 per square meter. In contrast, the landing and take-off fees relate to the exclusive use/sterilisation of an area of airfield land wholly outside leased or licensed areas. The costs covered by the aeronautical charges include the capital costs of the land area dedicated to helicopter operations and a proportion of property maintenance as detailed in SACL's financial model.

The Commission is satisfied that the costs recovered by the landing charges do not overlap with those recovered by the license fees. The Commission does not consider there is sufficient evidence to conclude that SACL is recovering the same costs twice. The Commission therefore accepts SACL's allocation of costs relating to helicopter landing charges as reasonable.

The Commission's decision is that SACL's ABC model represents a reasonable approach to the allocation of the airport cost base.

■ Chapter 10: Operating Expenditure

10.1 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.²⁶⁷ Thus, Sydney Airport is not subject to the same incentives as the privatised airports to minimise costs and operate efficiently.

The Commission's draft decision was to accept SACL's proposed operating costs for the 2000/01 period of \$56.4 million and estimated SACL achieving real cost savings of around 5 per cent per year over a five year period.

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 has considered submissions received in the first instance and in response to its draft decision.

The Commission's decision is concerned with ensuring that the setting of aeronautical charges is predicated on efficient operating costs.

10.2 SACL's Proposal

In its proposal 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.

²⁶⁷ The building block methodology is outlined in the Commission's DRP.

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.

SACL then adjusted the 1998/99 operating cost base downwards, excluding security costs and to reflect the non-recurring nature of some expenses including those related to Y2K preparation and bad debts. The 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.²⁶⁸

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 argues that its operating costs are reasonable and appropriate to its operating environment.²⁶⁹ SACL also states that Sydney Airport has a unique operating environment which stems from characteristics such as national gateway status, airline demand, its facilities and operational constraints.²⁷⁰

Consequently, SACL estimated aeronautical operating expenses to be approximately \$64.2 million for the 2000/01 period.

SACL later revised aeronautical operating costs to approximately \$56.4 million for the 2000/01 period.²⁷¹

In response to the Commission's draft decision SACL amended its operating costs to include the recently negotiated baggage trolley contract for the International Terminal and ground access service costs that directly support aeronautical services. This increases the total operating and maintenance costs to \$57.7 million.

10.3 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

²⁶⁸ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 111.

²⁶⁹ Ibid., p. 8.

²⁷⁰ Ibid., p. 114.

²⁷¹ See discussion on cost allocation in section 9.4.2.

- Failed to provide a transparent methodology for allocating operating costs between aeronautical and non-aeronautical services.

Furthermore, the available evidence strongly suggests that:

- 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.²⁷²

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.²⁷³

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.²⁷⁴

The International Air Transport Association (IATA) made similar comments to British Airways.²⁷⁵

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).²⁷⁶

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.

10.4 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.

The Commission's draft decision was to accept SACL's proposed operating costs of \$56.4 million and estimated SACL achieving real cost savings of around 5 per cent per year over a five year period. The Commission discussed three main issues regarding SACL's proposal that arose in initial submissions to the Commission. These were the methodology used to estimate operating costs, the

²⁷² Board of Airline Representatives of Australia, 2000b, op. cit., p. 161.

²⁷³ Ibid., p. 185.

²⁷⁴ British Airways, op. cit..

²⁷⁵ International Air Transport Association, 2000c, op. cit., p. 7.

²⁷⁶ Australia Pacific Airports Corporation, 2000b, op. cit., p. 10.

allocation of operating costs between aeronautical and non-aeronautical services and the issue of efficient levels of operating costs.

The discussion on each of these issues is contained below. Comments from submissions on response to the draft decision are also discussed. Submissions making specific comments regarding operating costs were received from SACL, BARA, Melbourne Airport and IATA.

10.4.1 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.²⁷⁷

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.²⁷⁸ That is, that SACL's operating costs are not as low and efficient as possible.

In its draft decision the Commission adopted a brown-fields approach to asset valuation (see the chapter on asset valuation 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.

The Commission did not receive any comment specifically relating to this in response to the draft decision. The Commission's decision remains that the approach used by SACL in estimating its operating costs for 2000/01 does not appear unreasonable.

Efficiency issues are discussed later in this chapter.

10.4.2 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 its proposal SACL states,

²⁷⁷ Board of Airline Representatives of Australia, 2000b, op. cit, p. 161.

²⁷⁸ Id.

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.

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.²⁷⁹

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.²⁸⁰

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 is necessary for efficient operation of aeronautical services.

In its draft decision the Commission stated:

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.²⁸¹

Guidance as to the basis of this allocation may be taken from the list of facilities at Sydney Airport declared by the Minister.²⁸² 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.²⁸³ 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

²⁷⁹ Sydney Airports Corporation Ltd, 2000c, op. cit, p. 123.

²⁸⁰ Board of Airline Representatives of Australia, 2000b, op. cit., p. 180.

²⁸¹ Australian Competition and Consumer Commission, 2000b, op. cit.

²⁸² Declaration No. 89, June 2000.

²⁸³ Australian Competition and Consumer Commission, 2000b, op. cit., p. 22.

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.

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.²⁸⁴

In response to the draft decision, however, SACL has adjusted its cost base to include the costs of the recently negotiated baggage trolley contract for the International Terminal and ground access costs that directly support aeronautical services. These adjustments increase operating costs from \$56.4 million to \$57.7 million for the 2000/01 period.

The Commission does not consider these adjustments to be unreasonable.

In its response to the draft decision BARA raises its specific concerns that,

SACL's cost base for aeronautical services includes operating expenditure recovered from airlines as lessee outgoings.²⁸⁵

Lessee outgoings are considered a non-aeronautical item. In terms of SACL's allocation of items between aeronautical and non-aeronautical services the Commission remains satisfied with the way SACL has allocated its costs.

10.4.3 Efficient operating costs

Thirdly, BARA submits that SACL's operating expenses are 'grossly excessive' and have not been established as efficient.

In its proposal SACL argues that Sydney Airport has 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.²⁸⁶

²⁸⁴ Australian Competition and Consumer Commission, 2001n, op. cit., pp. 129-130.

²⁸⁵ Board of Airline Representatives of Australia, 2001a, op. cit., p. 51.

In response to SACL's revised proposal, BARA makes 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...²⁸⁷

SACL presents a number of arguments as to why it has higher operating costs than the other privatised airports. For example, 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.²⁸⁸

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.²⁸⁹

SACL submits that any forward looking prices oversight (the current pricing regime at Sydney Airport) provides similar efficiency incentives as an explicit CPI – X prices oversight arrangement (the current pricing regime at privatised airports).

In its draft decision the Commission stated,

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.²⁹⁰ 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 SACL's arguments offer some justification for Sydney Airport's operating cost levels....

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

²⁸⁶ Sydney Airports Corporation Ltd, 2000c, op. cit., pp. 113-114.

²⁸⁷ Board of Airline Representatives of Australia, 2000b, op. cit., pp. 163-171.

²⁸⁸ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 125.

²⁸⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 169.

²⁹⁰ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 119.

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 by Melbourne, Perth and Brisbane Airports and examined SACL's operating costs in comparison.²⁹¹ 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.²⁹²

In its response to the Commission's draft decision SACL raises several points. Firstly, it questions the reasonableness of a five per cent reduction in operating costs per year. SACL argues it would not be able to achieve such reductions because it has already built in significant savings since corporatisation and its operating environment imposes greater constraints upon it than what the other privatised airport operators face. SACL suggests that a more reasonable figure would be a reduction of 3 per cent per year.²⁹³ SACL does not, however, provide any evidence to support its claim.

Accordingly, the Commission maintains the view that the approach adopted in the draft decision is reasonable.

SACL also suggests that there was an error in the Commission's financial modelling.²⁹⁴ However, the Commission's reduction in operating costs over the five year period was deliberately based on financial modelling of the real *unit* cost reductions achieved by the privatised airports. This allows for differences in volume growth which may give different outcomes in absolute terms. This was the Commission's intention and is not an error in the Commission's modelling. The adoption of updated traffic forecasts in this decision results in real reductions in operating costs of around 4 per cent.

SACL then goes on to argue that there are inconsistencies with the data sources in relation to the cost base used to calculate the savings achieved by the privatised airports. SACL states that,

The FAC percentage splits were based on a cost base which included depreciation, interest, corporate office overhead and Australian Protective Services (APS) expenses, but excluded check-in counter costs. This is not comparable to the cost base used for privatised airports in the following year which was based on their regulatory reports and which excluded APS, corporate office overhead interest and depreciation expenses but included check-in counter costs.²⁹⁵

The Commission considers any difference in the percentage split of the cost base is not greatly significant. However, in recognition of SACL's point, the Commission has excluded the FAC figures from its calculations to ensure consistency in the cost base. As already noted, in this decision, the real reduction in operating costs per year for the five year period is around 4 per cent.

²⁹¹ Comparison and calculations were based on data contained within the following: FAC *Annual Report*, 96-97, 97-98; ACCC Regulatory Reports: Sydney Airport 1998-99, 1999-2000 Brisbane Airport 1997-98, 1998-99, 1999-2000, Melbourne Airport 1997-98, 1998-99, 1999-2000, Perth Airport 1997-98, 1998-99, 1999-2000.

²⁹² Australian Competition and Consumer Commission, 2001n, op. cit., pp. 131-132.

²⁹³ Sydney Airports Corporation Ltd, 2001a, op. cit., pp. 78-79.

²⁹⁴ Ibid., p. 78.

²⁹⁵ Ibid., p. 79.

Finally, SACL argues that as Sydney Airport is nearing a point of full capacity, each additional unit starts imposing significant additional operating costs as more intensive management is required to maintain standards of facilitation and safety and security.²⁹⁶

Melbourne Airport also raises this point in support of SACL in response to the Commission's draft decision. It states that,

[b]ecause of surplus capacity, other airports are almost certainly going to experience declining average operating costs, and maybe, through management innovation, declining total operating costs.... SACL, however, because of congestion, is probably experiencing rising average operating costs and therefore rising total operating costs.... Even if SACL was operating efficiently in terms of operating costs, congestion may lead to increased operating costs as assets are utilised more heavily. This may actually lead to an increase in average costs.²⁹⁷

The Commission is not persuaded that SACL's marginal cost is greater than its average cost. In the short run marginal cost should be less than average cost. The full capacity and congestion SACL refers to relates to large sunk items such as runways and taxiways. Should investment be required in the long run to expand facilities the Commission considers that the necessary new investment provisions are the most appropriate method of recovering costs.

In response to the draft decision BARA, on the other hand, considers that the reduction in operating costs should be greater and should apply for the 2000/01 period. IATA also states,

... instead of accepting SACL's revised O&M cost for the first year, the efficiency improvement should also apply to the cost of that year.²⁹⁸

The Commission considers that as the new charges are only likely to be implemented in the late stages of the 2000/01 year it would not be reasonable to impose such cost reductions on SACL for this period.

BARA also argues that the Commission has not adequately considered benchmarking when looking at SACL's operating costs.²⁹⁹

In terms of benchmarking levels of operating costs, the Commission considers there are difficulties in this instance of finding appropriate airports to use as comparisons. Domestic airports have operating characteristics, for example, passenger mixes and demand characteristics, that differ from Sydney Airport. International airports have differences such as different ownership regimes in relation to operation of domestic terminals. The Commission, therefore, considers that while adjustments could be made to operating levels for these factors, this approach would be quite subjective. Accordingly, the Commission does not consider benchmarking levels of operating costs to be appropriate in this instance.

The Commission does, however, consider it appropriate to compare rates of change, that is, the productivity gains achieved by the other major airports (Brisbane, Melbourne and Perth). The major airports have achieved operating cost savings since they have been subject to greater incentives to operate efficiently, that is, since privatisation and the introduction of the CPI – X price cap regime.

²⁹⁶ Ibid., p. 82.

²⁹⁷ Australian Pacific Airports Corporation, 2001a, op. cit., p. 15.

²⁹⁸ International Air Transport Association, 2001b, op. cit., p. 7.

²⁹⁹ Board of Airline Representatives of Australia, 2001a, op. cit., pp. 48-49.

The Commission accepts arguments that SACL does not currently have the same incentives to operate efficiently as these privatised airports. In this regard the Commission considers that SACL should operate in an environment in which it is subject to the same incentives as the private airport operators. The Commission considers that the approach it adopts achieves this outcome.

The Commission has adopted a forward looking approach that both recognises that SACL's current operating costs may be too high and provides incentives for SACL to achieve productivity gains over the period under consideration. It is the Commission view that a five year period is an appropriate horizon to consider, as this is the same as the duration of the incentive regime facing privatised airports. The Commission believes SACL should be able to achieve savings of around 4 per cent per year in real terms.

10.5 Commission decision

This chapter considers the issues regarding SACL's aeronautical operating expenditure. Concerns had been expressed particularly in reference to the methodology used by SACL to estimate future operating costs, the cost allocation process between aeronautical and non-aeronautical and the level of operating costs.

The Commission considers that SACL's basis for the cost allocation process was not unreasonable. The Commission does, however, accept that SACL's operating costs may be too high and believes that its approach requiring real cost reductions both recognises this and provides incentives for SACL to achieve productivity gains. The incentives are similar to those currently faced by privatised airport operators and the productivity gains a reflection of those already achieved by the private operators.

As such, the Commission does not object to the proposed aeronautical operating costs for the 2000/01 financial period of approximately \$57.7 million and estimates real cost savings of around 4 per cent per year for the next five years.

The effect of real cost savings is reflected in the "smoothed" prices, discussed in Chapter 12.

<p>The Commission's decision is to not object to Sydney Airport's proposed aeronautical operating costs of \$57.7 million for the 2000/01 period. The decision estimates real cost savings of approximately 4 per cent per year for the next 5 years.</p>

■ Chapter 11: Weighted average cost of capital (WACC)

11.1 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.

11.2 WACC formulation

In regulated applications, there are several alternative approaches to incorporating a WACC in a project's expected costs. Whilst many methods are theoretically 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.

11.2.1 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:³⁰⁰

$\text{WACC} = r_e (E/V) + r_d (D/V)$ <p>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.</p>

Prior to applying this formula to its building block model, SACL converted the above nominal WACC into a 'real' WACC using the Fisher equation.³⁰¹

11.2.2 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'.³⁰² 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 12).

³⁰⁰ 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.

³⁰¹ The Fisher equation specifies the relationship between real interest rates (r), nominal interest rates (i) and expected inflation (p) in the following formula: $(1+r) = (1+i)/(1+p)$.

³⁰² Board of Airline Representatives of Australia, 2000b, 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.³⁰³

Melbourne Airport 'generally agree with the Commission's view that explicit modelling of the tax flows and the use of post tax WACCs have desirable properties'.³⁰⁴

11.2.3 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.³⁰⁵

11.2.4 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, 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

³⁰³ Brisbane Airport Corporation, op. cit., p. 11.

³⁰⁴ Australia Pacific Airports Corporation, 2001a, op. cit., p.15.

³⁰⁵ Board of Airline Representatives of Australia, November 2000d, *Attachment: the cost of capital*, p 4-5.

- 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.

Brisbane Airport's criticism of the post-tax approach is noted by the Commission. However, the Commission considers 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 via the use of an effective tax rate, which can in theory be higher or lower than the statutory tax rate, depending on the relative strengths of accelerated depreciation and the non-deductibility of certain items.

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'.³⁰⁶

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.

The Commission regards as reasonable SACL's use of a post-tax real WACC formulation for the purposes of calculating the return on capital in its building block model.

11.3 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

³⁰⁶ Davis, K., *Report on "Weighted average cost of capital for Sydney Airport"*, January 2000, p. 9.

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.

11.3.1 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.

11.3.2 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.

11.3.3 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'.³⁰⁷

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.³⁰⁸

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.³⁰⁹

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.³¹⁰

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

³⁰⁷ Sydney Airports Corporation Ltd, 1999b, op. cit., p. 6-5.

³⁰⁸ Board of Airline Representatives of Australia, 2000b, op. cit., p. 144.

³⁰⁹ Board of Airline Representatives of Australia, 2000d, op. cit., p 6.

³¹⁰ Id.

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'.³¹¹

11.3.4 Commission assessment

Two major issues associated with the risk free rate assumption have emerged in the regulatory context – bond maturity and averaging.

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.³¹² 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 supports 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.

The risk free rate assumption is taken from the 40 day average yield of the 5 year government bond rate, which as at 16 March 2001 was 4.98 per cent.³¹³

³¹¹ Davis, op. cit., p. 9.

³¹² For example, see Commission decisions regarding the pass through of necessary new investment costs: Australian Competition and Consumer Commission, 2000g, op. cit.; Australian Competition and Consumer Commission, 2000h, op. cit.

³¹³ 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.

11.4 Inflation

The expected inflation rate is used to convert nominal rates of return, such as the nominal WACC, into real rates of return.

11.4.1 SACL proposal

SACL adopts 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.

11.4.2 Views of interested parties

BARA views SACL's approach as 'reasonable'³¹⁴ and 'broadly agrees with the approach used by the Commission to determine the inflation rate'.³¹⁵

11.4.3 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.³¹⁶

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.³¹⁷

³¹⁴ Board of Airline Representatives of Australia, 2000b, op. cit., p. 144.

³¹⁵ Board of Airline Representatives of Australia, 2001a, op. cit., p.53.

³¹⁶ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 85.

³¹⁷ Board of Airline Representatives of Australia, 2000d, op. cit., p. 7.

11.4.4 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.³¹⁸ 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.

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 decision, the 5 year equivalent real bond rate is 2.98 per cent. Using the Fisher equation, this implies an expected inflation rate of 1.94 per cent.

11.5 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.

11.5.1 SACL proposal

SACL assumes a 1 per cent debt margin over and above the risk free rate, but in conjunction with a gearing assumption of 50 per cent.

11.5.2 Views of interested parties

BARA submits that the maximum debt premium for SACL is 1 percentage point over the chosen bond rate.

BA and IATA 'broadly agree with [SACL's] approach'.³¹⁹

Brisbane Airport argues for much higher debt margins than that proposed.

Hastings Funds Management argues for a debt margin of 1.5 per cent.

11.5.3 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 0.8-1.2.³²⁰

³¹⁸ These were extrapolated from the yields on August 2005 and August 2010 series capital indexed bonds

³¹⁹ International Air Transport Association, 2000c, op. cit., *Attachment A: Costs of capital and rate of return*, p. 2.

³²⁰ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 6.

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.³²¹

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.”³²²

In response to the draft decision, SACL contends that a 1 per cent debt premium is appropriate only when in conjunction with a gearing assumption of 50 per cent. When using the Commission’s preferred gearing assumption of 60 per cent, a higher debt premium is argued by SACL and their advisers, NERA, to be warranted.

Hastings puts the view that swap costs are ignored in the Commission’s calculation of a debt margin. It contends that in its experience, airports typically borrow in the bank market and use swaps to obtain fixed rate funding. The swap market’s higher premium calls for the debt premium to be extended a further 50 basis points, such that an all-inclusive debt premium is in the order of 1.5 per cent.

11.5.4 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.

The Commission does not accept SACL’s argument in relation to the use of its proposed 1 per cent debt margin conditional on a 50 per cent gearing assumption. Commission decisions in relation to several airports have incorporated higher debt margins with a 60 per cent gearing assumption. It is considered reasonable that a lower debt margin be applied to an airport of the size and scope of Sydney Airport.

Hastings’ argument in relation to bond swaps overlooks SACL’s use of a 1 per cent debt margin (albeit with slightly lower gearing).

Davis notes that the debt margin did ‘not seem unreasonable...’.³²³

The Commission’s decision is for a debt margin of 1 per cent to be added to the risk free rate to form the cost of debt

³²¹ Id.

³²² Brisbane Airport Corporation Ltd, op. cit., p. 16-17.

³²³ Davis, op. cit., p. 10.

11.6 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:

$$R_e = R_{fr} + B_e(MRP)$$

where R_{fr} = risk free rate of return, MRP (market risk premium) = $R_m - R_{fr}$, and B_e = equity beta.

In the CAPM context, the two contentious variables involved are the beta and MRP.

11.6.1 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 stock market.

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 0.08.³²⁴

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 a single till approach. BA and IATA support BARA's views on asset beta.

Melbourne Airport 'generally agrees with the approach adopted by the Commission'.³²⁵

³²⁴ The Appleyard and Strong formula for re-levering asset betas up to equity betas is as follows: $B_a + (B_a - B_d)\{1 - (K_{dn}/1 + K_{dn})T_e(1 - g)\}D/E$.

Perth and Brisbane Airports support SACL's proposal of a 0.70 asset beta.

Hastings submits that an asset beta of 0.70 is more appropriate than the draft decision's 0.60.

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.³²⁶

The major issues are discussed under the headings as outlined by SACL in its 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.³²⁷

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.³²⁸
- 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.³²⁹

³²⁵ Australia Pacific Airports Corporation, 2001a, op. cit., p. 16.

³²⁶ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 89.

³²⁷ Ibid., p. 92.

³²⁸ Board of Airline Representatives of Australia, 2000b, op. cit., p. 146.

³²⁹ Ibid., p. 154.

BARA presents 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 for 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, for the Commission's approach to be robust it 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'.³³⁰

In proposing an asset beta in line with that applied to other airports, SACL underlines 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.³³¹ 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.³³² BARA states:

...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.³³³

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 17 monthly observations, which is less than the 5 years BARA argues required for a reliable estimate. A larger sample of weekly observations yields an estimate for Auckland Airport of 0.40. 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.

³³⁰ Ibid., p 152.

³³¹ See the Adelaide Airport MUIT decision: Australian Competition and Consumer Commission, 1999c, op. cit.

³³² Board of Airline Representatives of Australia, 2000b, op. cit., p. 152.

³³³ Ibid., p. 147.

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, BARA argues 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 argues 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.*³³⁴

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...’³³⁵

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’.³³⁶

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

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

³³⁴ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 94.

³³⁵ Id.

³³⁶ Ibid., p. 95.

constitutes risk, but rather factors that cause fluctuations in earnings relative to fluctuations in earnings of the market portfolio.³³⁷

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.³³⁸

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 beta³³⁹

SACL maintains that its high operating leverage (the extent to which the cost structure is fixed) also warrants 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 notes 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)'.³⁴⁰

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."³⁴¹

SACL notes a point made by Patterson in the article cited by the airlines' advisers:³⁴²

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...³⁴³

SACL cites Brealey and Myers' textbook.³⁴⁴

... 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

³³⁷ Ibid., p. 96.

³³⁸ Id.

³³⁹ Id.

³⁴⁰ Id.

³⁴¹ Ibid., p 97.

³⁴² Patterson, C.S., *The Cost of Capital: Theory and Estimation*, 1995, p. 58.

³⁴³ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 97.

³⁴⁴ Brealey and Myers, *Principles of Corporate Finance 3rd Edn*, 1988, p. 188.

snooping.” Maybe the size and beta results are simply chance results, the effects of data snooping..³⁴⁵

SACL argues that:

To the extent it is believed to exist, empirical evidence on the size effect is strongest for the lowest 10th 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.³⁴⁶

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 SACL should have a lower asset beta than [Melbourne Airport]. It would be a mistake 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.³⁴⁷

Commission assessment

Beta arises in the context of the CAPM equation, in the guise of an equity beta.³⁴⁸

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 .

³⁴⁵ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 98.

³⁴⁶ Id.

³⁴⁷ Australia Pacific Airports Corporation, 2000b, op. cit., pp. 12.

³⁴⁸ 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 'unavoidable' correlation or co-variation with market returns.

However, systematic risk is not the only risk associated with investing in a particular stock or asset; 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, risk-averse 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. Prices of financial assets adjust such 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 and uncertainty in the returns accruing to an asset translate 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 systematic risk component.

The inherent difficulties of determining an appropriate asset beta in the context of Australian airports are well known. In the absence of observable betas, the Commission is in the position of relying on more indirect methods with which to establish a reasonable set of asset betas.

The nature of beta being a representation of the correlation of the company's returns to investors with the returns on the market suggests a method useful for helping to derive an asset beta for unlisted companies. 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 conceptual 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, and

- 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 in the long run 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, that is, airlines. Ultimately however, the revenue derives from passenger numbers. This implies that the revenues, and hence the returns to an airport investor, are ultimately linked to the throughput of passengers.

The relationship between income elasticities and asset betas would be most clearly apparent were airport charges in Australia set on a per passenger basis. However, 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.

This feature of airport charges is significant in the parallels being drawn between asset beta and income elasticity of demand. In particular it implies a major limitation of using an airport's income elasticity of demand figure for its actual asset beta. This is because 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 passenger growth.

The decision to nominate an asset beta for a particular airport essentially consists of two steps:

- 1) First, the choice of an asset beta range to apply to Australian airports generally, and
- 2) Once this range has been established, a point within this range must be chosen based on the particular risk characteristics of the airport in question in comparison to the other airports.

Step 1) requires an assessment of the best available information, and in the context of SACL's proposal, has been largely established through recent regulatory process. The range of 0.60 to 0.73 has been nominated on the weight of evidence, particularly asset betas estimated from foreign airports. However, it should be noted that recent evidence, such as that presented by BARA, indicates a reasonable likelihood of that range being considered to be arguably generous, if anything, especially in light of the 0.46 asset beta estimated for the Infrastructure group of companies on the Australian Stock Exchange,³⁴⁹ and the Australian Graduate School of Management's estimate of a 0.82 equity beta for the infrastructure group.³⁵⁰ Assuming 60 per cent gearing, an equity beta of 0.82 converts to an asset beta of 0.38. Even with conservative gearing of 40 per cent, this translates to an asset beta of 0.53.

³⁴⁹ Source: Independent Pricing and Regulatory Tribunal, *The Rate of Return for Electricity Distribution Networks – Discussion Paper*, November 1998, p. 32. This document can be obtained from IPART's web-site at <<http://www.ipart.nsw.gov.au>>.

³⁵⁰ AGSM, *Risk Measurement Service*, September 2000.

The second step essentially involves finding a basis to index the airports in terms of risk. The Commission's approach of using income elasticities recognises the close conceptual relationship between what is represented by them and what is captured by asset beta.

The analysis involves an identification of each airport's passenger mix. This reflects the assumption that 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 analysis breaks down the airport's passenger numbers along the following lines:

- Business or Leisure
- International or Domestic
- Inbound or Outbound

This implies the formation of the following specific categories, measured by percentage proportion of total passengers. The approach then applies an income elasticity measure to each of these categories:

- International outbound leisure – highest income elasticity of demand
- International outbound business – medium-high
- International inbound leisure – lowest
- International inbound business – low
- Domestic leisure (Australians) – high
- Domestic business (Australians) – medium-high
- Domestic inbound (foreigners travelling domestically) – lowest.

The assignment of income elasticity measures to each of these categories is based on economic logic and empirical information. 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 provide a lot of the empirical information for this approach to be operationalised.³⁵¹ The other key type of information is suitably disaggregated passenger

³⁵¹ See Hooper, P., 'The elasticity of demand for travel: a review', *Institute of Transport Studies, Graduate School of Business*, 1993; and Bureau of Transport and Communication Economics, *Working Paper 20 - Demand elasticities for air travel to and from Australia*, Commonwealth of Australia, 1995.

numbers at each airport, in order to determine the various proportions of passenger groups. This comes from the Australian Bureau of Statistics and Domestic Tourism Monitor reports.³⁵²

Applying elasticities to each category results in a weighted average income elasticity figure for each airport. The airports' systematic risks are then ranked on the basis of these figures. As explained above and in various Commission decisions, the ordering of the airports in this manner reflects the notion that the correlation of national income to passenger demand as represented by the income elasticity of demand is considered a close proxy to the correlation of returns to market returns as given by asset beta. The Commission notes that this approach is not dissimilar to that generally adopted by consultancy NECG, such as in its advice to Perth Airport.

In the case of Sydney airport, the analysis leads to the calculation of the lowest weighted average income elasticity figure out of all the airports. This result continues to hold under a sensitivity analysis, whereby the constituent income elasticities are varied over a reasonable range. The Commission contends that this strongly suggests that the systematic risk of Sydney airport's returns is the lowest amongst the set of Australian airports. Accordingly, the Commission arrived at an asset beta of 0.60 for Sydney airport. Nonetheless, in granting SACL an asset beta of 0.60 for its aeronautical services, the Commission has adopted a conservative approach, reflecting the lack of certainty surrounding the parameter.

Income elasticity approach compared to other approaches

The income elasticities approach provides an 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 in the long term, 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.

A range of characteristics are important in assessing the suitability of comparators. Lally 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

³⁵² See Australian Bureau of Statistics, *Overseas Arrivals and Departures 1976 - onwards, Movement Year and Month, Category of traveller and Reason for journey by Port of clearance*, and Bureau of Tourism Research, *Domestic Tourism Monitor*, 1998.

income elasticity of demand (luxuries), because the demand for the product is less sensitive to real GNP shocks.³⁵³

- 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.³⁵⁴

- 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 problematic 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 ± 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 1.4.³⁵⁵

Therefore, 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.

Size effect

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's 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'.³⁵⁶

³⁵³ Lally, M., *The cost of equity capital and its estimation*, Vol. 3 McGraw-Hill series in Advanced Finance, 2000, p. 27.

³⁵⁴ Ibid., p. 28.

³⁵⁵ Ibid., p. 26.

³⁵⁶ Davis, op. cit., p. 9.

Response to the draft decision

SACL objects to the Commission's approach to asset beta on several grounds. SACL believes that the approach to asset beta has been characterised by a lack of transparency.

SACL criticises the Commission's approach on account of its conceptual validity. SACL refers to Morin's textbook *Regulatory Finance*, which postulated asset beta to be a function of demand risk, operating leverage, and financial leverage. The Commission's approach, according to SACL, considers only demand risk and financial leverage, ignoring operating leverage.

SACL also argues that the Commission's view of demand risk is flawed, raising doubts about the strengths of the purported correlations underpinning the Commission's approach. For example, it argues that changes in market returns are not necessarily correlated to changes in GDP, even over a relatively long time period. It also casts doubt on the relationship between share price returns, revenues and passenger numbers.

The structure of prices at Sydney, in the context of the proposed change in the charging basis for the international terminal, suggests the income elasticity of demand approach will underestimate Sydney's beta relative to other airports.³⁵⁷

In addition, SACL's operating leverage is argued to be highest of all Australian airports. Operating leverage refers to the ratio of fixed costs to variable costs in the cost base. The higher the operating leverage, argues SACL, the lower the ability of a firm to respond to demand shifts through a compensating reduction in operating costs, and thus the greater the variability in profits in response to change in market conditions.

SACL's arguments regarding the conceptual validity of the Commission's asset beta approach are not without foundation. However, its critique overlooks some important aspects of the approach which is partly as a result of the draft decision's omission of some of the model's assumptions. First, as a general statement, SACL is overstating the extent to which the Commission itself accords precision to its asset beta approach. The imperfections of the income elasticity approach are readily acknowledged by the Commission. There are various factors that would influence a firm's systematic risk, hence the difficulty of determining betas for unlisted companies. However, economic logic and views previously expressed by NECG lend weight to the proposition that the use of income elasticities is conceptually a reasonable method of differentiating between firms of similar risk.

The correlation assumed to hold in the approach between market returns and national GDP is considered reasonable. Without question, the two variables can and do diverge for short periods. However, finance theory dictates that the valuations implied by the value of a diversified portfolio must, over time, reflect the health and future prosperity of the economy and its firms. It is also assumed in the approach that operating leverage for Australian airports is given. The alternative of attempting to evaluate each airport's operating leverage would be subject to significant informational obstacles. Nonetheless, the Commission considers that an assumption of equal operating leverage is a realistic one.

³⁵⁷ Sydney Airports Corporation Ltd, 2001a, op. cit., p. 88.

SACL argues that the income elasticity estimates used for the Commission's approach are subject to high degrees of uncertainty and unreliability.

As a consequence, the composite income elasticities for the sample airports are untrustworthy. They will reflect any number of effects correlated with income. To use these estimates then to infer asset betas, from what we presume are only incremental differences in composite elasticities between the set of airports, is completely flawed.³⁵⁸

SACL's points in respect of the statistical reliability of the estimates are acknowledged. However, as set out in this decision, the Commission used these estimates only as indicative estimates of the likely income elasticities. The Commission's analysis uses a range of estimates for the likely income elasticities, based partly on the cited studies, and heavily on economic logic. This is illustrated in the Commission's *a priori* assumption that the correlation between international inbound passengers and the national Australian economy is likely to be very small, irrespective of empirical estimates of this figure. Indeed a case could be made for a negative correlation between these two variables, given that tourism, being an export, would have a negative correlation to the Australian dollar, which in turn reflects somewhat the strength of the domestic economy.

SACL points out what it perceives to be inconsistencies in the Commission's approach to asset beta, referring to the Melbourne Airport decision, NECG's analysis for Perth Airport, and BARA's asset beta analysis.

The Commission takes issue with each of SACL's observations. First, SACL is incorrect in talking of Melbourne Airport's 'income elasticity of demand analysis'. Melbourne Airport used a statistical analysis, and the Commission's conclusions with respect to the risks of Melbourne Airport, *not* the analysis itself, were similar to those of Melbourne Airport's. Similarly, the similarity of the Commission's approach with that adopted by NECG for Perth Airport extends as far as the use of the income elasticity of demand as the basis for an asset beta. The *application* of this notion differs between the two parties, thus generating different conclusions.

SACL's reference to BARA's conclusion that 'the analysis of the relationship between passengers and real GDP is not able to shed any light on the relative systematic risks of the airports ...'.³⁵⁹ also appears to overlook that the analysis used was different to that of the Commission's. In BARA's case, correlation coefficients formed the basis of the analysis.

Whilst the systematic risk of an airport is higher, all else equal, to the extent that revenues are linked to passengers, the Commission is mindful of adjusting asset beta based on the particular charging basis of each airport. This would have the undesired effect of distorting decisions in respect of charging, and in particular create the adverse incentive for airport operators to shift their pricing schedules to passenger based charges in order to be granted higher asset betas and consequent returns on equity. The Commission then takes the assumption that the primary charging basis at airports for the purposes of calculating cost of capital is MTOW.

In the case of SACL, it should be noted that the passenger based charge, being an international terminal charge, applies only to international passengers. The income elasticity approach views the two types of international passengers in vastly different ways. International inbound passenger

³⁵⁸ Ibid., p. 89.

³⁵⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 152.

demand is considered to have almost no correlation to the national economy. International outbound passenger demand is assumed to have a high income elasticity. In the analysis, were the income elasticity on these passengers to double, it would still leave Sydney airport with among the lowest composite income demand elasticities. This suggests that SACL's systematic risk is on the weight of evidence likely to be among the lowest of Australian airports.

BARA states that,

...determining where the asset beta for Sydney Airport should lie relative to other Australian airports is helpful only if the Commission has determined the appropriate asset betas for the other Australian airports. The elasticity approach upon which the Draft Decision is largely based is only capable of determining the asset beta of one firm **relative** to another. The income elasticity does not measure, nor can it be used as a sensible estimate of a firm's asset beta. The income elasticity of demand and the asset beta measure different things. Where the income elasticity of demand may be useful is in determining the relative asset betas of firms. All else equal, if the income elasticity of demand for firm A's product is 1.5 and the income elasticity of demand for firm 2's product is 0.5, it is likely that the asset beta of the second firm will be lower

The implication of this is clear. If the Commission's elasticity approach is to shed light on the appropriate asset beta for Sydney airport, the Commission must have in mind the appropriate asset beta for other Australian airports.³⁶⁰

The Commission notes that BARA agrees with the essential underpinning of the income elasticity approach, that is, its usefulness as a tool to rank airports on their relative riskiness. As was clear in the draft decision, the Commission has not used its composite income elasticity results as a *direct* proxy for asset beta. The income elasticity approach finds its usefulness in shedding significant light on the relative risks of airports. BARA is correct in adjudging that the asset beta range for airports *generally* must also be established before that pertaining to SACL is determined.

BARA reaffirms the need to adopt a benchmarking approach involving foreign listed airports comparisons in order to determine the generic asset beta for unlisted Australian airports. BARA's claims that their analysis indicates that 0.60 asset beta accorded SACL in the draft decision is too generous, given the 0.40 to 0.45 average pertaining to foreign listed airports.

The Commission acknowledges BARA's empirical evidence, and in particular makes the contrasting observation of the SACL submission's relative paucity of empirical evidence to support its proposed asset beta of 0.70. In light of the empirical evidence showing average asset betas below 0.50, the Commission regards the determination of a 0.60 asset as falling at the top of a reasonable range.

Melbourne Airport's position is similar in principle to the Commission's:

APAC generally agrees with the approach adopted by the Commission in this area. As we have argued, it is not the volatility of volume that is the issue but rather the extent of its correlation with underlying market returns (for which GDP is used as a proxy) that matters. This is the approach that we have adopted and although our statistical analysis (which is publicly available) differs from that described by the Commission both in the draft decision and elsewhere it appears to reach the same general conclusions.

....

Our approach and that of the Commission has been to look at a relative ordering of airports based upon an analysis of the correlation of various traffic components with Australian GDP. Implicit in

³⁶⁰ Board of Airline Representatives of Australia, 2001a, op. cit., p. 54.

this is the presumption that past GDP stands as a proxy future market returns and that traffic volumes stand as a proxy for future equity returns. This means that future earnings expectations are, in effect, being based on past realisations of proxy variables...³⁶¹

Melbourne Airport also notes that in light of certain characteristics, such as the absence of long term contracts, it could be expected that airports would have higher income elasticities and hence asset betas than other infrastructure industries. The Commission is satisfied that this decision, as well as its other airport decisions, reflects this observation.

Hastings expresses general dissatisfaction with the CAPM model and the inapplicability of its assumptions of perfect liquidity and no transaction costs to the real world facing airports. It argues that an illiquidity premium should be added to beta to reflect the relative illiquidity presently faced by airport operators in capital markets. It concedes that the size of this premium is unknown, but argues recent literature on the effect of illiquidity on valuations suggests that a higher asset beta, in the order of 0.70 is justified.

The literature on illiquidity appears to be in its formative stages. Whilst the Commission does not dismiss its validity or relevance, it considers that the traditional CAPM, used in its traditional manner, is still regarded as the benchmark approach to the evaluation of equity risk. Further, the CAPM's assumption of the ability to diversify away from idiosyncratic risk applies to the mass of equity capital investors in the airport, not to the airport operator itself. The presence of specific risk, as discussed above, is something uncompensated for in the CAPM model. Therefore, the Commission considers the CAPM and an asset beta unadjusted for specific illiquidity to be appropriate and justified.

In sum, the Commission wishes to emphasise that the determination of an appropriate asset beta for an unlisted company requires considerable 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. SACL's proposed 0.70 asset beta is considered to be at best the upper end of a reasonable range, in light of the average asset betas of foreign airports and the nature of Sydney Airport's passengers relative to other airports.

BARA's 0.40 – 0.45 asset beta range is also not without merit, however, it is considered that asset betas of this size would be inconsistent with the asset betas determined for the other airports, and that this would not be justified on account of any significant demonstrable differences in systematic risk.

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, results in an equity beta of 1.37.³⁶²

³⁶¹ Australia Pacific Airports Corporation, 2001a, op. cit., p. 16.

³⁶² The Commission uses a version of the Appleyard and Strong formula, developed by Monkhouse, which adjusts for the presence of gamma: $Ba + (Ba - Bd)\{1 - (Kdn/1 + Kdn)Te(1 - g)\}D/E$.

11.6.2 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 diversified 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 represents 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.³⁶³

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'.³⁶⁴

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.³⁶⁵

....

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.³⁶⁶

In response to the draft decision, BARA contends that the Commission appears to have placed little weight on recent evidence of the decline in the MRP and that 5.5 per cent remains a conservative upper limit for this parameter.

³⁶³ Sydney Airports Corporation Ltd, 2000c, op. cit., p. 87.

³⁶⁴ Ibid., p. 8.

³⁶⁵ Board of Airline Representatives of Australia, 2000b, op. cit., p. 145.

³⁶⁶ Board of Airline Representatives of Australia, 2000d, op. cit., p. 10.

Davis states that 6.0 per cent ‘seems reasonable’.³⁶⁷

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 Commission’s DRP,

In summary, the market risk premium is an inherently poorly defined parameter with considerable uncertainty associated with its estimation.³⁶⁸

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 tend to suggest a MRP that is declining, rather than increasing over time in Australia.³⁶⁹

A survey of recent studies of the Australian MRP reveals a wide range of market risk premiums, and indeed a discernible declining trend. The studies suggest that the MRP is unlikely to be 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, 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 6.0 per cent.
--

11.7 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.

11.7.1 SACL proposal

SACL assumes a 50 per cent gearing level (of the ODRC value of assets).

³⁶⁷ Davis, op. cit., p. 9.

³⁶⁸ Australian Competition and Consumer Commission, 1999a, op. cit., p. 79.

³⁶⁹ 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.

11.7.2 Views of interested parties

BARA agrees with the Commission's use of 60 per cent for the gearing assumption.

Hastings submits a gearing ratio of between 25 and 42 per cent is appropriate.

11.7.3 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.

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 60/40.³⁷⁰

Hastings argues that the Commission's 60 per cent benchmark approach to gearing is flawed and arbitrary. Rather, it asks the Commission to investigate the actual debt ratios of foreign listed airports, and thus,

...remain neutral on capital structuring. It should neither reward nor penalise a company for its capital structure, as the market does not put a premium on leverage...the Commission should choose a gearing level that relates to the sample of listed entities from which it is also calculating its equity beta. In our view, this level is in the order of 25 to 42 per cent.³⁷¹

11.7.4 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. It is this notion which drives the Commission's view of the optimality of adopting an idealised gearing ratio of 60 per cent for airports. The views advanced by Hastings are acknowledged, however it is considered that the actual gearing ratios of a small sample of foreign airports would not necessarily represent a reasonable estimate of an optimal gearing ratio. A 60 per cent gearing ratio is argued to act as an incentive for regulated firms to structure their capital such that the cost of capital is minimised, whilst

³⁷⁰ Board of Airline Representatives of Australia, 2000d, op. cit., p. 10.

³⁷¹ Hastings Funds Management Limited, *ACCC Draft Decision on Sydney Airport Prices – Submission from Hastings Funds Management Limited*, 2001, p. 6.

not being placed in a perilous financial position. Whilst a gearing level of 60 per cent could be perceived as being relatively high, it is considered that the relatively low insolvency risk of operating infrastructure renders this figure a reasonable assumption.

Davis argues that a gearing ratio of 50 per cent ‘does not seem unreasonable’.³⁷²

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 to apply to SACL’s WACC. 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 a debt/equity ratio of 60:40 for this decision.

11.8 Taxation

11.8.1 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.

11.8.2 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.

11.9 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 income 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.

³⁷² Davis, op. cit., p. 10.

11.9.1 SACL proposal

SACL proposes to adopt a franking credits utilisation factor, or gamma, of 0.50.

11.9.2 Views of interested parties

BARA argues that a gamma of close to 1 is justified, and that there is strong evidence that 0.50 is too low.

11.9.3 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."³⁷³

However, in line with the competitive neutrality principles as set out in the Competition Principles Agreement, SACL submits 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 states 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.³⁷⁴

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.

³⁷³ Sydney Airports Corporation Ltd, 1999b, op. cit., p. 6-13.

³⁷⁴ Ibid., p. 4.

BARA presents the following table of estimated tax imputation (Gamma) factors:

Table :Estimated Tax Imputation (Gamma) Factors³⁷⁵

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 ^a

^a 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.*³⁷⁶

BARA cites the opinion of Professor Davis reported in the Brisbane and Perth Airport necessary new investment decisions:

...there is more evidence showing a value for gamma closer to one than evidence of gamma lower than 0.5.³⁷⁷

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 1.³⁷⁸

³⁷⁵ Board of Airline Representatives of Australia, 2000d, op. cit., p. 12.

³⁷⁶ Ibid., p. 13.

³⁷⁷ Board of Airline Representatives of Australia, 2000d, op. cit., p. 13. For new investment decisions see: Australian Competition and consumer Commission, 2000g, op. cit.; Australian Competition and Consumer Commission, 2000h, op. cit.

³⁷⁸ Board of Airline Representatives of Australia, 2000d, op. cit., p. 13.

11.9.4 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.

Gamma is a reflection of two aspects relating to the effect of franking credits on investor income – their distribution and their utilisation. Therefore, in determining the appropriate gamma, one must form a view on these two aspects.

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 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 argues 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 argues that 'the available evidence is more compatible with a value closer to unity than lower than 0.50.'³⁷⁹

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 future decisions 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 for example, which showed a gamma close to one on the weight of evidence, as one indication of an upwards trend in this parameter.³⁸⁰ Furthermore, the Commission acknowledges BARA's analysis of the implications on gamma of the Ralph Report recommendations and subsequent legislation. An assumption of full distribution together with the greater utilisation 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 decision is to accept SACL's proposed gamma of 0.50.

11.10 Commission decision

The Commission's decision is for the WACC parameters listed in the table below.

Table 11(a): WACC Parameters

WACC parameters	SACL proposal	Commission draft decision	Commission decision
Inflation rate, %	2.60	2.44	1.94
Debt, %	50	60	60

³⁷⁹ Davis, op. cit., p. 10.

³⁸⁰ Lally, op. cit.

Equity, %	50	40	40
Nominal risk free rate, %	6.12	5.53	4.98
Real risk free rate, %	3.43	3.02	2.98
Market risk premium, %	6.0	6.0	6.0
Asset beta	0.70	0.60	0.60
Debt beta	0.08	0.08	0.08
Equity beta	1.31	1.37	1.37
Corporate tax rate, %	30	30	30
Debt Margin, %	1.0	1.0	1.0
Nominal cost of debt, %	7.12	6.54	5.98
Franking credit utilisation – gamma	0.5	0.5	0.5
Post-tax cost of equity (CAPM), %	13.98	13.74	13.19
Vanilla real WACC, (%)	7.75	6.81	6.80

■ Chapter 12: Financial modelling

12.1 Introduction

As detailed in Chapter 3, the Commission does not object to the use of a building block methodology by SACL. Chapters 4 through 11 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 12.2 summarises the key inputs into the building block model. Section 12.3 discusses the effect of volume growth, while section 12.4 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 12.5, and the Commission's decision is presented in section 12.6.

12.2 Building block approach

The following table compares SACL's proposed inputs against those the Commission used in determining an allowable revenue figure.

Table 12(a): Building block components

Variable	SACL's Proposal	Commission draft decision	Commission decision
Aeronautical Asset Base (2000/01)	\$1690m	\$1439m	\$1422m
Depreciation (2000/01)	\$46.7m	\$38.1m	\$35.3m
Operating & Maintenance Expenditure (2000/01)	\$64.2m	\$56.4m	\$57.7m
Post-Tax Nominal Return on Equity (for detailed parameters see chapter 10)	14%	13.7%	13.2%

12.3 Traffic forecasts

SACL calculates 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 2000/01.³⁸¹

The Commission's view is that future volume growth is highly relevant to determining an appropriate level of prices. Prior to issuing its draft decision, the Commission obtained volume forecasts from SACL for the five year period to 2004/05. These forecasts were prepared for SACL in March 2000 by Tourism Futures International (TFI). 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. After the release of the draft decision, however, SACL made these available to interested parties on a confidential basis.

In its draft decision, the Commission used the forecasts provided by SACL for 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. In its submission regarding the draft decision, BARA is critical of the Commission's approach, arguing that 'forecasts provided by SACL underestimate both current levels of traffic for 2000-01, and expected rates of growth in future years'.³⁸² Similarly, Virgin Blue states that 'we believe that the domestic traffic volume has increased by up to 40% on the routes that the new operators are flying'.³⁸³ The Virgin Blue submission is supported by actual year-to-date figures collated by the Department of Transport and Regional Services.

Accordingly, the Commission has acted to improve the robustness of the projected traffic volumes. At the Commission's request, SACL obtained (in March 2001) updated forecasts from TFI. These forecast volumes were generally higher than those contained in the March 2000 estimates. The Commission is of the view that these revised traffic projections provide a reasonable basis for determining aeronautical charges, and has used these figures in its decision.

These revised figures appear to address BARA's and Virgin Blue's concerns in that they reflect strong growth in actual year-to-date volumes, and are in line with forecasts provided recently in relation to passenger screening and counter terrorist first response (CTFR) charges.

12.4 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 decision assumes real reductions of around 4 per cent per annum); and

³⁸¹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 94.

³⁸² Board of Airline Representatives of Australia, 2001a, op. cit., p. 59.

³⁸³ Virgin Blue, *Draft Decision on Pricing Proposal by Sydney Airports Corporation Ltd*, March 2001.

- 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 forecast period. An alternative scenario might be for larger 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.

In its draft decision, 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.

In its response to the draft decision, IATA supports the Commission’s five year time horizon but argues that annual reviews of SACL’s pricing be undertaken to ‘take into account evolution of traffic, financial performance and other relevant developments’.³⁸⁴ The Commission’s view is that this is a less suitable approach, as such reviews would undermine SACL’s incentives for growing volumes and reducing costs. Accordingly, the Commission has not changed the approach it adopted in the draft decision.

The Commission considers that – in the event that the current regulatory arrangements remain in place - it would be appropriate for prices 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 decision are set out in Table 12(c) below.

Table 12(c): ‘Smoothed’ Allowable revenue (5 year estimation)

	2000/01	2001/02	2002/03	2003/04	2004/05
Draft Decision	\$160m	\$167m	\$175m	\$182m	\$191m
Decision	\$183m	\$190m	\$196m	\$205m	\$215m

12.5 Conclusion

As outlined in chapters 4 and 5, the Commission’s draft decision estimated a contribution from aeronautical-related services in determining an appropriate allowable revenue to SACL from

³⁸⁴ International Air Transport Association, 2001b, op. cit., p. 6.

aeronautical charges. The contribution amounted to \$22.6m in 2000/01. For the reasons detailed in chapters 4 and 5, the contribution has been removed in this decision.

Accordingly, on the basis of the inputs specified in section 12.2 above, the Commission's decision estimates an allowable revenue figure for 2000/01 of \$199m. After smoothing prices to allow for real cost savings and volume growth over the next five years, this allowable revenue falls to \$183m 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 12(d): Modelled revenue

Modelled revenue 2000/01	SACL Proposal	Commission original draft decision	Commission updated draft decision¹	Commission final decision
Asset base (2000/01)	\$1,690.3m	\$1,438.9m	\$1,422.3m	\$1,422.3m
Post-tax nominal return on equity	14%	13.7%	13.2%	13.2%
Return on capital	\$130.7m	\$98.0m	\$96.6m	\$96.6m
+ Return of capital (depreciation)	+ \$46.7m	+ \$38.1m	+ \$35.3m	+ \$35.3m
+ O&M costs	+ \$64.2m	+ \$56.4m	+ \$57.7m	+ \$57.7m
= Sub-total	\$241.6m	\$192.5m	\$189.5m	\$189.5m
+ Net taxation ²	+ \$16.2m	+ \$8.6m	+ \$9.2m	+ \$9.2m
- Assumed capital gain on land ³	- \$14.7m	\$0	\$0	\$0
- Contribution – aeronautical-related services	\$0	- \$22.6m	- \$15.2m	\$0
- Other Adjustments ⁴	- \$31.7m	- \$18.4m	- \$14.7m	- \$15.2m
Revenue 2000/01	\$211.5m	\$160.1m	\$168.8m	\$183.5m

1. Included for comparison purposes. The contribution from aeronautical-related services is included here, based on additional information provided by SACL. These figures can be compared to the final decision to demonstrate the effect of Direction No. 22.

2. 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.

3. 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.

4. SACL's original proposal (as shown in this table) estimated an allowable revenue, based on the costs included in the building block methodology, of \$243.2m. Based on the traffic volumes adopted in this decision, however, the prices proposed by SACL would generate revenues of around \$211m (had they been in place for the full financial year). This is effectively an adjustment made by SACL to compensate for future efficiency gains and volume growth. Similarly, the adjustments to the Commission's draft a final decisions represent the effect of price smoothing, as detailed in chapter 12.

In translating these revenues to price levels, the Commission made adjustments such that, where the Commission objected to SACL's proposed prices, the prices endorsed in the draft decision rose

equi-proportionately. The Commission would generally not object should SACL wish to re-configure these prices, provided the re-configuration remained revenue-neutral.

SACL's proposal, and the Commission's assessment, were based on GST exclusive costs and prices. This decision specifies both GST exclusive and inclusive prices.

12.6 Commission decision

The Commission's decision is to not object to the set of prices (inclusive of GST) specified in Table 12(f). The corresponding GST exclusive prices – contained in Table 12(e) - are expected to generate revenues in line with the Commission's calculated allowable revenue figure of \$183m.

Following the Commission's decision, SACL may wish to further re-structure prices. The Commission would generally not object to a re-configuration of prices, providing the re-configuration remained revenue-neutral.

Table 12(e): Approved prices (GST exclusive)

Charge	Unit	Price Levels (GST exclusive)		
		SACL Proposal	Commission draft decision	Commission final decision
Runway	Per 1000kg MTOW per movement	\$4.00	\$3.07	\$3.44
International Terminal	Per passenger	\$9.50	\$7.28	\$8.17
Apron Parking	Per 15 minute block	\$35.00	\$35.00	\$35.00
(Bussing /stand off discount)	Per use of bus	(\$200.00)	(\$200.00)	(\$200.00)
Helicopter Movements	Per movement	\$25.00	\$25.00	\$25.00
General Aviation Parking	Per day or part thereof (>2 hours)	\$60.00	\$60.00	\$60.00

Table 12(f): Approved prices (GST inclusive)

Charge	Unit	Price Levels (GST inclusive)	
		SACL Proposal	Commission final decision
Runway	Per 1000kg MTOW per movement	\$4.40	\$3.78¹
International Terminal	Per passenger	\$10.45	\$8.98
Apron Parking	Per 15 minute block	\$38.50	\$38.50
(Bussing/stand off discount)	Per use of bus	(\$200.00)	(\$200.00)²
Helicopter Movements	Per movement	\$27.50	\$27.50
General Aviation Parking	Per day or part thereof (>2 hours)	\$66.00	\$66.00

1. The runway charges are subject to the following proposed minimum charges:

- Scheduled regional airline services (MTOW 0-5 tonnes) - \$20.00 per movement (GST excl), \$22.00 (GST incl);
- Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement (GST excl), \$45.37 (GST incl); and
- All other aircraft - \$50.00 per movement (GST excl), \$55.00 (GST incl).

Currently the minimum charge for fixed wing aircraft is \$100 per landing (equivalent to \$50 per movement).

2. 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.

Chapter 13: Structure of prices

SACL proposes 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.³⁸⁵

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 decision supports the proposed restructuring of prices, subject to adjustments to price levels as discussed in chapter 12. The proposals do not, however, fully address a number of concerns in relation to congestion management.

13.1 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.

...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

³⁸⁵ Sydney Airports Corporation Ltd, 1999b, op. cit., p. 8-1.

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.³⁸⁶

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. The Commission is also encouraged by SACL's discounts for new entrants operating at off-peak times.

Introduction of further 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.³⁸⁷

Similarly, Virgin Blue notes that '[p]roviding access to peak period slots for new and growing entrants at Sydney will be critically important to enable new entrants to compete'.³⁸⁸

13.1.1 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

³⁸⁶ Sydney Airports Corporation Ltd, 2000c, op. cit., p. xix.

³⁸⁷ Impulse Airlines, op. cit.

³⁸⁸ Virgin Blue, op. cit.

proposed increases in charges for Sydney Airport ‘do not affect some Regional Airlines substantially and some not at all’.³⁸⁹ However, the RAAA went on to say that:

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.³⁹⁰

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’.³⁹¹

The Commission has considered 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’.³⁹² 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.³⁹³

The Commission makes no comment on this submission, but, notes that SACL proposes to consider pricing based on time of day usage at a later date.

13.2 Commission decision

The Commission’s 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.

³⁸⁹ Regional Airlines Association of Australia, *Public Discussion Forum – Sydney Airport Pricing Proposal*, November 2000.

³⁹⁰ Ibid.

³⁹¹ Riverina Regional Organisation of Councils, *Sydney Airport*, January 2001.

³⁹² Overnight Airfreight Operators Association, *OAOA’s Submission to ACCC on SACL’s Draft Pricing Proposal*, November 2000, p. 2.

³⁹³ Ibid, p. 3.

■ Chapter 14: Commission decision

The Commission's decision is that it objects to the provision by SACL of the aeronautical services referred to in its proposal at the proposed prices, but, that it does not object to their provision in accordance with 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 14(a): Aeronautical charges

Charge	Unit	Commission Decision (GST exclusive)	Commission Decision (GST inclusive)
Runway	per 1000kg MTOW per movement	\$3.44	\$3.78¹
International Terminal	per passenger	\$8.17	\$8.98
Apron Parking	Per 15 minute block	\$35.00	\$38.50
(Bussing/stand off discount)	Per use of bus	(\$200.00)	(\$200.00)²
Helicopter Movements	Per movement	\$25.00	\$27.50
General Aviation Parking	Per day or part thereof (>2 hours)	\$60.00	\$66.00

1. The runway charges are subject to the following proposed minimum charges:
 - Scheduled regional airline services (MTOW 0-5 tonnes) - \$20.00 per movement (GST excl), \$22.00 (GST incl);
 - Scheduled regional airline services (MTOW 5-10 tonnes) - \$41.25 per movement (GST excl), \$45.37 (GST incl); and
 - All other aircraft - \$50.00 per movement (GST excl), \$55.00 (GST incl).

Currently the minimum charge for fixed wing aircraft is \$100 per landing (equivalent to \$50 per movement).
2. 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.

The impact of these prices on consumers is discussed in Appendix C.

A comparison of these charges with charges at other airports in Australia and overseas is at Appendix D.

■

■ **APPENDIXES**

■ **APPENDIX A: Relevant legislative instruments**

PRICES SURVEILLANCE ACT 1983

Part III--Functions of the Commission

SECTION 17

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 20

Directions of Minister as to special considerations

The Minister may, by instrument in writing delivered to the Chairperson, direct the Commission to give special consideration, in exercising its powers and performing its functions under this Act, to the matter or matters specified in the instrument, and the Commission shall comply with such a direction.

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 (ACCC), 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 ACCC in considering notifications to increase prices for declared services. In reporting on the quality of service indicators, the ACCC will focus on the facilities and services provided by, or which could be influenced by, the airport operator.

(2) The ACCC 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 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 ACCC will provide a statement of reasons for its determination.

- (3) 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 NO 22

I, Joe Hockey, Minister for Financial Services and Regulation, in pursuance of section 20 of the *Prices Surveillance Act 1983*, hereby direct the Australian Competition and Consumer Commission, in exercising its powers and performing its functions under the Act in relation to the pricing of services at Sydney (Kingsford-Smith) Airport, to give special consideration to the following matter:

- In assessing prices for aeronautical services, the Commission should not take into account the revenues generated, or costs incurred, in the provision of services other than aeronautical services.

JOE HOCKEY

19 April 2001

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 15th day of October 1985

P. J. KEATING

■ **APPENDIX B: Dual till: methodology of the draft decision**

This appendix explains in more detail the approach - taken by the Commission in the draft decision - to estimating a contribution from aeronautical-related services. Chapters 4 and 5 of this decision explain the rationale behind taking such a contribution. Section B.1 outlines the general principles of the approach of the draft decision and some responses to it. Section B.2 details the updated estimates of the parameters of the contribution. These demonstrate what the financial effect of taking the contribution would have been, had that approach been adopted in this decision.

B.1 Draft decision

The approach adopted in the draft decision was to take the financial performance of aeronautical-related services into account by means of a contribution from the profits of those services. The approach calculated above normal returns from those services in 2000/01 and deducted those profits from the aeronautical revenue requirement.

The approach adopted used the building block methodology.

In estimating the 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 reflected the extent to which revenues appeared to be above normal for the 2000/01 period. It did not model costs and revenues going forward.

Under this approach, all profits from aeronautical-related services are retained by SACL going forward, including any increased profitability.

Some submissions in response to the draft decision were critical of the Commission's approach to estimating above normal revenues. Melbourne Airport argues that 'the Commission's concern about market power seems to rest on an arbitrary calculation of excess returns'.³⁹⁴ It argues that the returns realised by airport operators for services such as car parks are reflective of their locational advantage rather than any abuse of market power.

The emergence of these "excess returns" is a direct arithmetic consequence of the failure to value the underlying assets (and in particular land) at their true market value.³⁹⁵

Similarly, Perth Airport argues that the Commission's estimate of excess returns rests upon an incorrect valuation of land, while SACL argues that:

The ACCC's finding of 'above normal' returns in the provision of non-aeronautical services is completely dependent on its prior – and controversial – assumption about the proper valuation of land.³⁹⁶

³⁹⁴ Australia Pacific Airports Corporation, February 2001a, *Submission in Response to the Draft Decision of the ACCC relating to the Aeronautical Pricing Proposal of Sydney Airports Corporation Limited*, p. 11.

³⁹⁵ *Ibid.*, p. 12.

³⁹⁶ Sydney Airports Corporation Limited, 2001a, *op. cit.*, p. 50.

In response to these arguments the Commission notes that the estimated contribution from non-aeronautical services was based on the building block methodology, which forms the basis for many regulatory pricing decisions, and upon which SACL based its pricing proposal. By way of comparison, the Commission estimated the land value at which SACL's car parking returns would appear 'normal' to be around \$880 per square metre. This is some 9 - 10 times the valuation SACL proposed as the opportunity cost of its aeronautical land.

B.2 Updated financial modelling

Prior to the receipt of Direction No. 22, the Commission had refined its estimate of an appropriate contribution from aeronautical-related services. This estimate was somewhat lower than that in the draft decision, mainly due to adjustments made to the estimated land value and cost and asset allocations relating to aeronautical-related services.

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.

Prior to the draft decision, 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. In the draft decision, the Commission estimated depreciation for 2000/01 with reference to the weighted average rate of depreciation on aeronautical assets.

In its response to the draft decision, SACL provides the Commission with actual depreciation rates applicable to aeronautical-related assets. SACL also provides information relating to the allocation of ground access assets to aeronautical-related services. This information was used to refine the Commission's estimate of an appropriate contribution from aeronautical-related services.

The Commission also obtained operating cost and revenue data from SACL's Regulatory Accounting Statements.³⁹⁷ These were inflated to provide estimated operating and maintenance costs, as well as revenues, for 2000/01. In responding to the draft decision, SACL provides additional information regarding the allocation of ground access costs to aeronautical-related services. Again, this information was used to refine the Commission's estimate of an appropriate contribution from aeronautical-related services.

The cost of capital and taxation parameters were the same as those applied to SACL's aeronautical activities.

Using the information described above, the Commission estimated the required revenues to SACL which would justify the continued provision of aeronautical services. This estimate was then compared against the approximate revenues SACL currently receives from these services.

These values are summarised in the following table.

³⁹⁷ These are provided to the Commission for regulatory reporting purposes.

Table B: Aeronautical-related variables

Aeronautical-related variables (2000/01)	Commission draft decision	Updated Estimate
Average Aeronautical-related Asset Base – Non-Land	\$95.3m	\$129.0m
Average Aeronautical-related Asset Base – Land	\$37.2m	\$26.3m
Post-Tax Nominal Return on Equity	13.7%	13.2%
Return on Capital	\$9.0m	\$10.5m
Depreciation	\$3.6m	\$6.0m
Aeronautical-related O&M Expenditure	\$28.6m	\$31.4m
Net Taxation	\$0.8m	\$1.1m
Modelled Aeronautical-related Costs*	\$42.0m	\$49.0m
2000/01 Aeronautical-related Revenues**	\$64.6m	\$64.2m
Contribution - Aeronautical-related services	\$22.6m	\$15.2m

*This figure represents the revenues required to cover the estimated cost of providing aeronautical-related services (including cost of capital).

** This figure is an estimate of SACL's current actual aeronautical-related revenues.

The Commission's draft decision estimated the appropriate contribution from aeronautical-related services in 2000/01 to be \$22.6m. When revised to reflect the additional information provided by SACL, the corresponding figure was \$15.2m. This contribution would be carried forward on an indexed basis over the modelled period. The contribution was not predicated on future changes to aeronautical-related prices, revenues, costs or volumes. That is, the Commission did not explicitly model potential growth in returns to SACL from the provision of these services.

■ APPENDIX C: 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 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 return airfares. Two types of return ticket prices were used in the assessment – discounted fares and full economy fares.

Table C 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 an estimated \$14.78. In percentage terms, the largest increase is on the same route, at around 3.7 per cent.

Table C: Impact on fares

Route: Sydney to ...	Aircraft	Dollar increase in fare	Percentage increase in fare – discount fare^a	Percentage increase in fare – full economy fare^b
International				
London – Return Airfare	B744 - Boeing 747-400	\$12.79	0.8%	0.5%
London – Return Airfare	B742 - Boeing 747-200	\$13.21	0.8%	0.6%
London – Return Airfare	B743 - Boeing 747-300	\$13.21	0.8%	0.6%
London – Return Airfare	B74A - Boeing 747- 1/2/300	\$13.21	0.8%	0.6%
London – Return Airfare	B74S - Boeing 747SP	\$13.26	0.8%	0.6%

^a Source: Estimates of return discount airfares based on market enquiries.

^b Source: SACL's estimate of full economy fares.

London – Return Airfare	B773 - Boeing 777-300	\$14.40	0.8%	0.6%
Singapore - Return Airfare	A340 - Airbus A340	\$13.13	1.8%	1.1%
Singapore - Return Airfare	B772 - Boeing 777-200	\$14.25	1.9%	1.1%
Singapore - Return Airfare	A330 - Airbus A330	\$14.50	1.9%	1.2%
Auckland - Return Airfare	B763 - Boeing 767-300	\$13.56	3.4%	1.2%
Auckland - Return Airfare	A306 - Airbus A300-600	\$14.26	3.6%	1.2%
Auckland - Return Airfare	A300 - Airbus A300	\$14.23	3.6%	1.2%
Auckland - Return Airfare	B762 - Boeing 767-200	\$14.34	3.6%	1.2%
Auckland - Return Airfare	B734 - Boeing 737-400	\$14.27	3.6%	1.2%
Wellington - Return Airfare	B733 - Boeing 737-300	\$14.18	3.5%	1.2%
Wellington - Return Airfare	B732 - Boeing 737-200	\$14.78	3.7%	1.3%
Domestic				
Perth - Return Airfare	B762 - Boeing 767-200	\$4.05	0.7%	0.3%
Melbourne - Return Airfare	B734 - Boeing 737-400	\$2.99	1.5%	0.5%
Melbourne - Return Airfare	A320 - Airbus A320	\$2.57	1.3%	0.5%
Melbourne - Return Airfare	B733 - Boeing 737-300	\$3.28	1.6%	0.6%
Melbourne - Return Airfare	B732 - Boeing 737-200	\$2.58	1.3%	0.5%
Melbourne - Return Airfare	B717 – Boeing 717	\$2.71	1.4%	0.5%
Regional				
Dubbo – Return Airfare	DHC8 - De Haviland DH8	\$0.62	0.6%	0.2%
Dubbo - Return Airfare	DH8 - De Haviland DHC-8	\$0.28	0.3%	0.1%
Dubbo - Return Airfare	SF34 - SAAB 340 A-A	No increase		
Dubbo - Return Airfare	B190 - Beech 1900D	No increase		

Newcastle - Return Airfare	BE02 - Beech 1900C BE02	No increase		
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	\$1.99	2.0%	0.8%
Singleton - Return Airfare	PA31 – Piper PA31-350	No increase		

■ APPENDIX D: International Comparisons

D.1 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.³⁹⁸ 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.

D.2 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.³⁹⁹

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.⁴⁰⁰

Melbourne Airport endorses the use of TRL data for the purpose of comparing airport charges, and highlights the usefulness of international comparisons generally.

D.3 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 decision. As covered in detail in the body of the decision, the assessment of SACL's proposal was made on its own merits within a cost-based framework.

Nonetheless, in considering the implications of its decision, the Commission made use of both SACL's submitted comparison of international charges, and of an additional report the Commission

³⁹⁸ Transport Research Laboratory, *A review of aeronautical charges at Sydney Airport - in a world and regional context, Final Report*, October 1999.

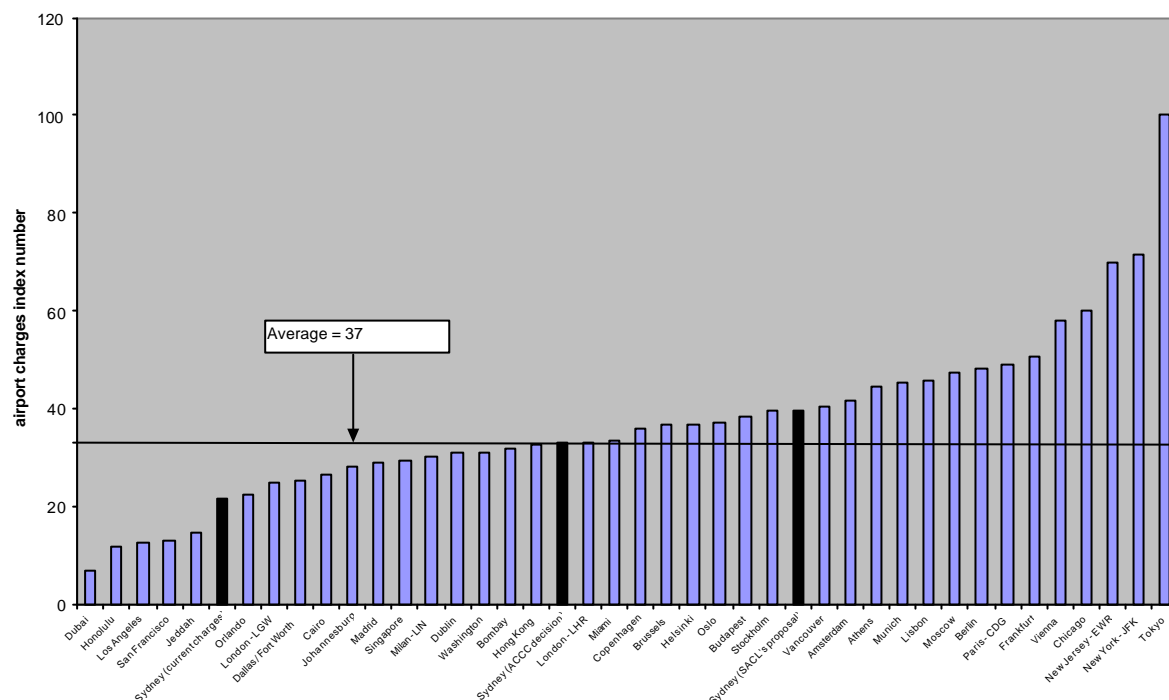
³⁹⁹ Board of Airline Representatives of Australia, 2000b, op. cit., p. 163.

⁴⁰⁰ G Woodbridge, Transcript of Proceedings: *Australian Competition and Consumer Commission Sydney Airport Public Discussion Forum*, 13 December 2000, p. 24.

purchased from TRL. It should be noted that the TRL reports make an adjustment for different currencies to enable ready comparison of charges.

Chart D1 illustrates TRL's international comparison of airport charges, augmented by the addition of SACL's proposed charges and of the charges approved in the decision. Note that the latter are still below the average charges of those airports surveyed.

Chart D1: International Airport Charges Index 1999



The Commission obtained TRL's 2000 edition of *Airport Performance Indicators* in order to enable further comparison.⁴⁰¹ 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 D2 and D3 respectively illustrate these two comparisons.

It can be observed that under both measures, Sydney airport's existing, proposed and approved charges are below the international average.

⁴⁰¹ Transport Research Laboratory, *Airport Performance Indicators 2000*, August 2000.

Chart D2: Aeronautical Revenue per Aircraft Movement

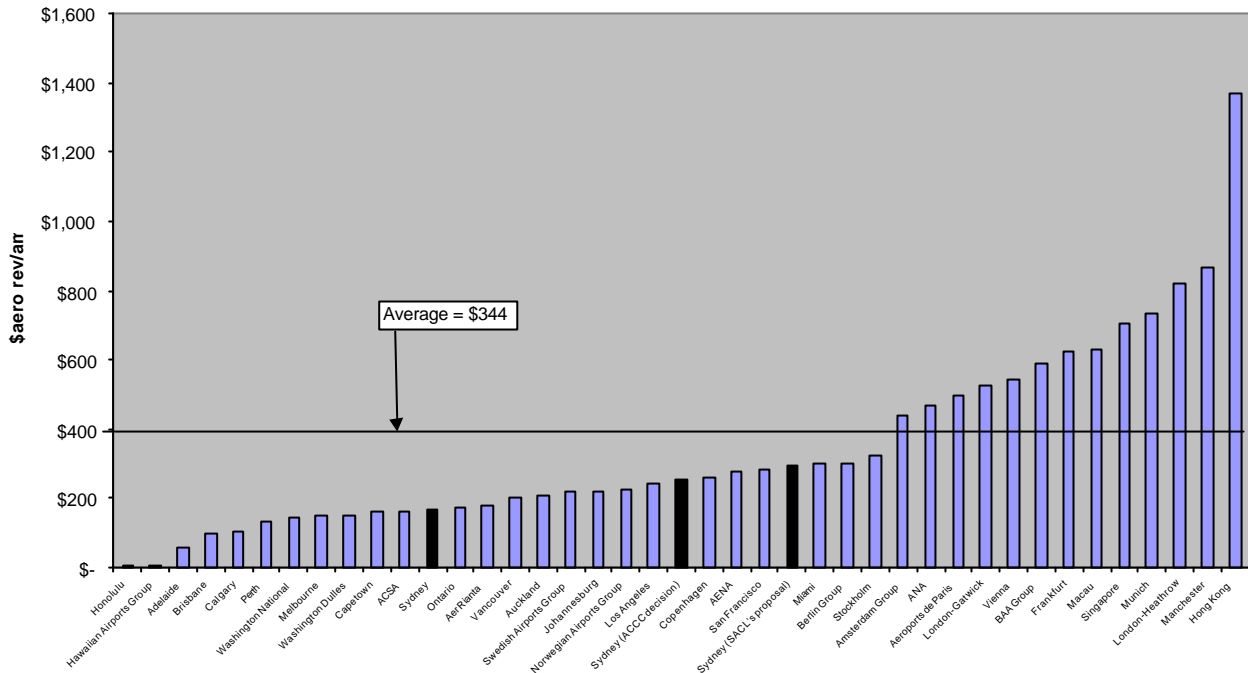
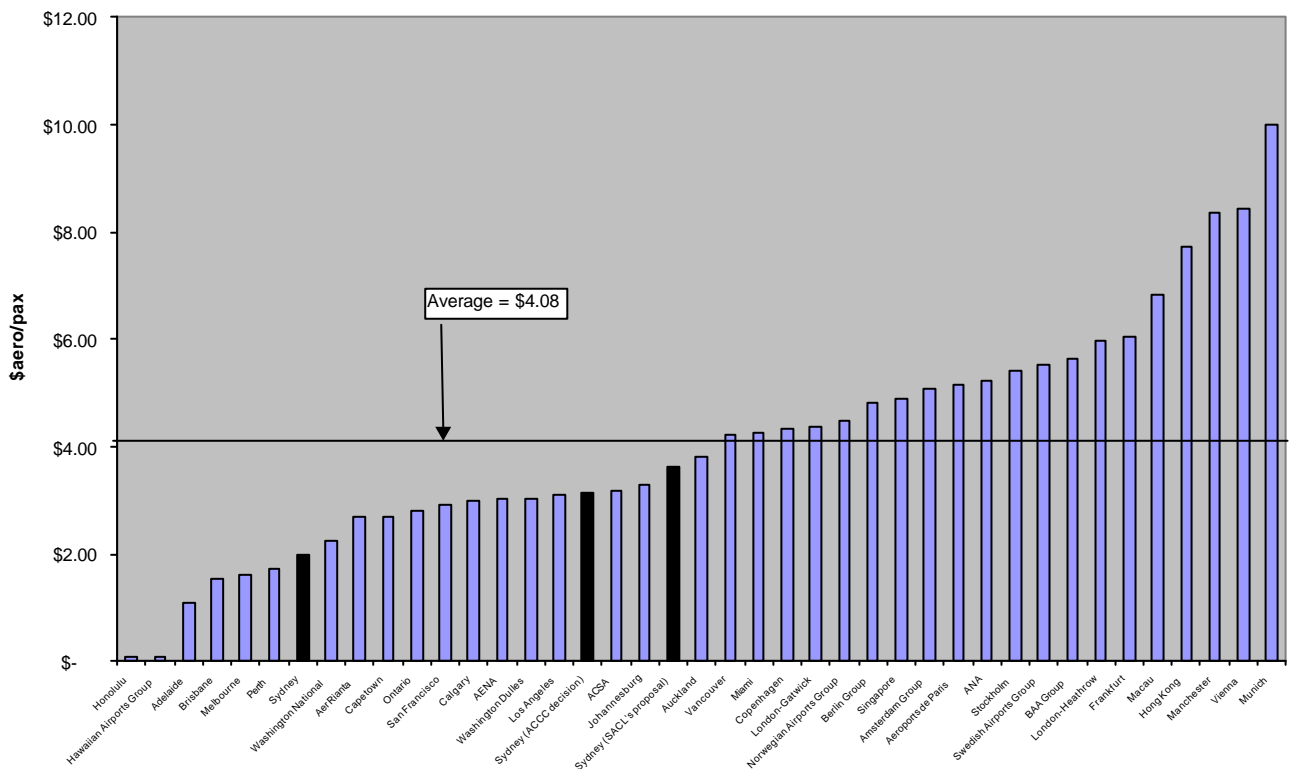


Chart D3: Aeronautical Revenue per Passenger



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