



Australian Government
Productivity Commission

Economic Regulation of Airports

Productivity Commission
Inquiry Report

No. 92, 21 June 2019

© Commonwealth of Australia 2019

ISSN 1447-1337 (online)

ISSN 1447-1329 (print)

ISBN 978-1-74037-679-2 (PDF)

ISBN 978-1-74037-678-5 (print)



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An appropriate reference for this publication is:

Productivity Commission 2019, *Economic Regulation of Airports*, Report no. 92, Canberra.

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The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).



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21 June 2019

The Hon Josh Frydenberg MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with section 11 of the *Productivity Commission Act 1998*, we have pleasure in submitting to you the Commission's final report into *Economic Regulation of Airports*.

Yours sincerely

A handwritten signature in black ink, appearing to read 'PL' with a large flourish.

Paul Lindwall
Presiding Commissioner

A handwritten signature in black ink, appearing to read 'SK' with a large flourish.

Stephen King
Commissioner

Terms of reference

I, Scott Morrison, Treasurer, pursuant to Parts 2 and 3 of the Productivity Commission Act 1998, hereby request that the Productivity Commission undertake an inquiry into the economic regulation of airports.

Background

Airports operated by the Federal Airports Corporation were privatised during the period 1997-2002. Whilst privatisation has resulted in significant airport infrastructure investments at major airports, successive governments have asked the Productivity Commission (PC) to undertake periodic reviews to determine whether the economic regulatory oversight of these airports remain in line with community and industry expectations.

Prior to 1997, airport pricing and conditions were set by the government. For the five years 1997-2002, some of these airports were subject to a price capping regime.

In 2002 a Commission inquiry into the price regulation of airport services found concerns regarding the significant market power held by some major airports did not warrant the strict regulation imposed, and indeed, believed it was negatively affecting productivity and airport investment. The price capping regime was replaced with a price and quality of service monitoring regime in which pricing terms and conditions became subject to commercial negotiations between the airports and the airlines, monitored annually by the Australian Competition and Consumer Commission (ACCC).

The 2006 Commission inquiry into price regulation of airport services examined the price monitoring regime and recommended the arrangements continue for Adelaide, Brisbane, Perth and Sydney airports. In 2008 the monitoring regime was extended to include prices, costs and profits relating to car parking at these five major airports. In 2009, the Government introduced a second tier self-administered price and quality of service monitoring and reporting regime for Canberra, Darwin, Gold Coast and Hobart airports.

The 2011 Commission inquiry examined the effectiveness and efficiency of the economic regulation and quality of service monitoring regime for airports and found that the regulatory oversight had been effective and should be maintained for Brisbane, Melbourne, Perth and Sydney airports, with a further review to be conducted in 2018.

The purpose of this Inquiry is to determine the effectiveness and efficiency of the current arrangements and determine whether they remain appropriate.

Scope of the inquiry

In undertaking the Inquiry, the Commission should report on the appropriate economic regulation of airport services, including the effectiveness of the price and quality of service monitoring, in achieving the following objectives:

- promoting the economically efficient operation of, and timely investment in, airports and related industries;
- minimising unnecessary compliance costs; and
- facilitating commercially negotiated outcomes in airport operations.

In addition, the inquiry should focus on the provision of passenger and freight transport services at, and surrounding, the main passenger airports operating in Australia's major cities. The Commission should examine:

- aeronautical services and facilities provided by airport operators;
- passenger-related aeronautical services and facilities provided by major airline tenants; and
- the provision and quality of land transport facilities providing access to the airports.

Following on from its 2011 findings, matters the Commission should also consider include:

- the effectiveness of the monitoring regime conducted by the ACCC, including the methodology used and the adequacy of the information collected;
- whether the current regime impacts on the ability of airports to price, operate and invest in airport infrastructure in an efficient and timely manner;
- whether the existing regime is effective in appropriately deterring potential abuses of market power by airport operators; and
- whether existing arrangements for the planning and operation of land transport linkages to the airports are effective.

The Government remains strongly committed to maintaining access for regional communities into Sydney Airport. In order to ensure that the arrangements continue to work in the best interests of regional passengers, the regulatory price cap and price notification regime for regional air services into and out of Sydney Airport (Declaration 94 under section 95X of the *Competition and Consumer Act 2010*) should be reviewed to look at any unintended consequences of the arrangements.

The Commission should also review competition in the market for jet fuel in Australia, including the provision of jet fuel at the major airports.

Process

The Commission is to undertake an appropriate public consultation process including holding hearings, inviting public submissions and releasing a draft report to the public.

The final report should be provided within 12 months of the receipt of these terms of reference.

The Hon Scott Morrison MP
Treasurer

[Received 22 June 2018]

Acknowledgments

The Commission has used information from a range of sources in preparing this report. The Commission is grateful for the contributions made by individuals and organisations through their submissions, and their participation in meetings and public hearings.

The Commission wishes to express its appreciation to Commissioner Kenneth Baxter who assisted in the preparation of the draft report for this inquiry.

Disclosure of interests

The *Productivity Commission Act 1998* specifies that where Commissioners have or acquire interests, pecuniary or otherwise, that could conflict with the proper performance of their functions during an inquiry they must disclose the interests.

Paul Lindwall has advised the Commission that he is a director and shareholder of Bizair Aircraft Pty Ltd which owns and operates an A36 Bonanza registered VH-FIM.

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Abbreviations

A4ANZ	Airlines for Australia & New Zealand
AAA	Australian Airports Association
AAIG	Australian Airports Investors Group
ABAA	Australian Business Aviation Association
ABS	Australian Bureau of Statistics
ACA	Airport Coordination Australia
ACCC	Australian Competition and Consumer Commission
ACI	Airports Council International
ACT	Australian Capital Territory
AER	Australian Energy Regulator
ANEI	Australian Noise Exposure Index
APAC	Australian Pacific Airports Corporation
APAM	Australia Pacific Airports (Melbourne)
ASA	Airservices Australia
ASQ	Airport Service Quality (survey program)
ATRS	Air Transport Research Society
BAC	Brisbane Airport Corporation
BAe-146	British Aerospace 146
BARA	Board of Airline Representatives of Australia
BBM	Building block model
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BNE	Brisbane Airport
BTS	Bureau of Transport Statistics (New South Wales)
CACG	Community Aviation Consultation Group
CASA	Civil Aviation Safety Authority
CBD	Central business district
CCA	<i>Competition and Consumer Act 2010 (Cwlth)</i>

CCTV	Closed-circuit television
CPI	Consumer price index
DEA	Data envelopment analysis
DIA	Darwin International Airport
DITCRD	Department of Infrastructure, Transport, Cities and Regional Development
DOEE	Department of the Environment and Energy
DTL	Domestic terminal lease
EBIT	Earnings before interest and taxes
EBITA	Earnings before interest, taxes and amortisation
EBITDA	Earnings before interest, taxes, depreciation and amortisation
EPNdB	Effective perceived noise in decibels
ERA	Economic Regulation Authority (Western Australia)
ESC	Essential Services Commission (Victoria)
ESCOSA	Essential Services Commission of South Australia
FAC	Federal Airports Corporation
FER	Functional economic region
FTL	Fuel throughput levy
GDP	Gross domestic product
GST	Goods and services tax
HBA	Hobart Airport
IATA	International Air Transport Association
IPART	Independent Pricing and Regulatory Tribunal
IRR	Internal rate of return
JOSF	Joint operated storage facility
JUHI	Joint user hydrant installation
JV	Joint venture
KIC	King Island Council
KPI	Key performance indicator
LCC	Low-cost carrier
LTOP	Long term operating plan
MEL	Melbourne Airport

MTOW	Maximum take off weight
NCC	National Competition Council
NQA	North Queensland Airports
NSW	New South Wales
NT	Northern Territory
PC	Productivity Commission
PCF	Planning Coordination Forum
PER	Perth Airport
PPP	Purchasing power parity
PRSS	Permanent regional service series
Q8	Kuwait Petroleum International
QAL	Queensland Airports Limited
Qld	Queensland
RAAA	Regional Aviation Association of Australia
RAAF	Royal Australian Air Force
RAB	Regulatory asset base
Rex	Regional Express
ROAA	Return on aeronautical assets
RPT	Regular public transport
SA	South Australia
SLA	Service level agreement
SYD	Sydney Airport
Tas	Tasmania
TFP	Total factor productivity
TRA	Tourism Research Australia
USD	United States Dollar
Vic	Victoria
WA	Western Australia
WACC	Weighted average cost of capital
WSG	Worldwide Slot Guidelines

Glossary

Aeronautical charges	Charges for services defined as aeronautical services under the Airports Regulations 1997 (Cwlth).
Aeronautical Pricing Principles	The set of principles for airports and airport users to establish prices, service delivery and the conduct of commercial negotiations at airports. The Commission has drawn on these principles to assess the reasonableness of current aeronautical charges and the commercial negotiation process between airports and airlines.
Aeronautical revenue	Revenue from operations defined as aeronautical services under the Airports Regulations 1997 (Cwlth).
Aeronautical services	Services provided by infrastructure that facilitates aircraft movements, for example runways, and passenger processing facilities as defined under the Airports Regulations 1997 (Cwlth).
Aeronautical charges	Charges for services defined as aeronautical services under the Airports Regulations 1997 (Cwlth).
Air transport services	Transport services provided by an airline.
Aircraft movement	An aircraft arriving at, or departing from, an airport.
Airport services	All services provided by an airport, including aeronautical services, such as terminal and aircraft services and facilities, and non-aeronautical services, such as car parking and landside access.
Airside	Areas related to the provision of aircraft-related services and facilities and most passenger-related facilities, for example terminals, runways, aprons, aerobridges.
Amortisation	An accounting method for allocating the cost of intangible assets (assets that lack physical substance) as an annual cost over the useful life span of that asset. Actual expenses are incurred at the time the investment is made. Amortisation is not an ongoing cash cost, but the business will incur ongoing finance costs as a result of investment in assets.

At-terminal car park	Car park operated by the airport and located on airport land that is a short walking distance from the terminal.
At-distance car park	Car park operated by the airport and located on airport land that is at a distance from the terminal. Users generally catch a shuttle bus from the car park to the terminal.
Building block model	A model to determine charges by ‘building up’ an airport’s expected costs, such as capital costs, operating costs and tax liabilities. Some infrastructure regulators use a building block model to determine total allowable revenue for regulated firms.
Common-user terminals	Terminals and associated infrastructure managed by the airport operator and available for use by a more than one airline.
Depreciation	An accounting method for allocating the cost of tangible assets (physical infrastructure) as an annual cost over the useful life span of that asset. Actual expenses are incurred at the time the investment is made. Depreciation is not an ongoing cash cost, but the business will incur ongoing finance costs as a result of investment in assets.
Domestic terminal lease	An arrangement whereby an airline leases an entire terminal from an airport operator and provides terminal services, such as check-in and baggage facilities, directly to passengers.
Dual till	Under a dual-till approach, only revenues and costs that relate to aeronautical services are subject to regulatory oversight.
Economic efficiency	Economic efficiency is the result of an allocation of resources that maximises the collective wellbeing of the community. Achieving economically efficient outcomes requires the satisfaction of three different concepts of efficiency: allocative, productive and dynamic efficiency.
Functional economic region	An approach to defining regions for analysis and decision making. Regions are defined on the basis of interactions between people across neighbouring areas.
General aviation	Aircraft operations that are not regular public transport, such as private charter and aircraft training flights, and Royal Flying Doctor Services.
Hybrid till	Under a hybrid-till approach, a proportion of non-aeronautical revenues and costs, in addition to aeronautical revenues and costs, is subject to regulatory oversight.

Landside	Areas related to the provision of ground transport services including kerbside areas for public pick-up and drop-off, pick-up and drop-off areas for landside operators such as taxis and off-airport car park operators, facilities for landside operators such as waiting areas, and roads within the airport precinct.
Landside access operator	A company or operator that has an arrangement with the airport operator to access landside areas for the purposes of facilitating ground travel to and from the airport. Taxis, rideshare, private buses, public transport, car share, off-airport car park, chauffeur services, and car rental operators use landside services.
Light-handed regulation	A regulatory regime that involves regular monitoring of activities and a credible threat of further regulatory intervention. In airport services, users such as airlines negotiate directly with airport operators on charges and other terms of access. Governments generally do not intervene in the setting of charges or terms of access, but collect and publish information about airports' financial and operational performance.
Load factor	The number of passengers carried expressed as a percentage of the number of seats available on an aircraft.
Locational rents	Profits in excess of normal returns that arise because users are prepared to pay a premium for space that is limited in preferred locations, such as at-terminal car parking or being picked up by a taxi in close proximity to the airport terminal.
Long-run average cost	The long-run average cost of provision is a conceptual benchmark for assessing whether the pricing of infrastructure services is efficient. Firms operating in competitive markets that are not natural monopolies would price at or close to this benchmark. Long-run average cost is also the minimum that a natural monopoly producer could charge to ensure it remains viable over time.
Maximum take off weight	The maximum certified take off weight of an aircraft fully loaded with passengers, cargo and fuel.
Monitored airports	The four Australian airports (Sydney, Melbourne, Brisbane and Perth) currently subject to ACCC monitoring of prices and quality of service.
Natural monopoly	A provider may be considered a natural monopoly where it can meet existing and foreseeable market demand at a lower average cost than when there is more than one provider in the market.

Non-aeronautical services	Services provided by or at airports that are not aeronautical services under the Airports Regulations 1997 (Cwlth). This includes car parks; business parks; shopping centres; and food and retail services within the terminal.
Operating costs	Includes salaries and wages, services and utilities, property maintenance, security, contract services and general administration. Does not include finance costs (costs to debt or equity providers) or tax.
Total costs	Operating costs plus depreciation, amortisation. Does not include finance costs (costs to debt or equity providers) or tax.
Operating profit	Measures of operating profit (or net earnings) are equal to revenue minus costs, where costs can be defined in different ways. This includes EBIT, EBITA and EBITDA. For EBIT, costs are defined as operating costs, depreciation and amortisation. For EBITA, costs are defined as operating costs, and depreciation. For EBITDA, costs only includes operating costs.
Operating profit margins	Operating profit divided by total revenue or passenger numbers.
Opportunity cost	The value of a benefit forgone when choosing one action, for example an investment opportunity, over another.
Passenger movement	A passenger arriving or departing by aircraft.
Permanent regional service series	The slot series through which Sydney Airport's regional ring fence is implemented. These are used by airlines operating flights to or from regional New South Wales.
Price discrimination	A supplier charges a different price to different customers for the same good or service. This practice can be efficient.
Profitability	Profit scaled in some way, such as profit as a percentage of revenue or assets or (for airports) profit per passenger.
Profit	Revenue minus costs. See operating profit for a more precise definition.
Purchasing power parity	An exchange rate conversion that equalises the purchasing power of different currencies by adjusting for the differences in price levels between countries.

Regional ring fence	A feature of the Sydney Airport Slot Management Scheme 2013 that reserves a number of slots at Sydney Airport for airlines operating flights to or from regional New South Wales. Implementation of the regional ring fence is through slot series called ‘permanent regional service series’.
Regular public transport	Scheduled aircraft operations provided to the public on a commercial basis.
Return on aeronautical assets	Return on aeronautical assets is a measure of return on capital assets. In the ACCC monitoring report it is defined as operating profit (EBITA) from aeronautical services divided by tangible non-current aeronautical assets.
Scheduled charges	Published charges for aeronautical services, commonly referred to as rack-rates. These charges can differ from charges negotiated in commercial contracts so are a proxy for the actual charge paid by an airline.
Single till	Under a single-till approach, all aeronautical and non-aeronautical revenues and costs are subject to regulatory oversight.
Slot	A permission for an aircraft to take off or land at an airport at a specific time on a specific day.
The ‘line in the sand’ for asset values	The ‘line in the sand’ was implemented in the 2007-08 ACCC monitoring report and all subsequent reports. Asset values at 30 June 2005 were taken as given and airports could include new assets on a cost basis as agreed between airports and airport users (less depreciation and disposals).
Weight-based charges	Airport charges for the use of airport services based on the weight of the aircraft (usually maximum take off weight).
Weighted average cost of capital	The return on capital required to cover a firm's cost of debt and cost of equity.

OVERVIEW

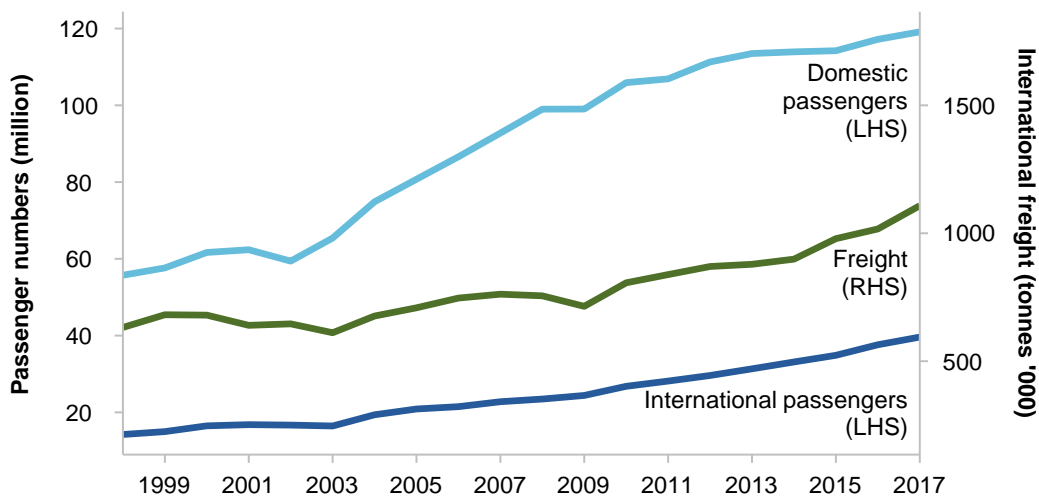
Key points

- The four airports monitored by the Australian Competition and Consumer Commission (ACCC) — Sydney, Melbourne, Brisbane and Perth — have not systematically exercised their market power in commercial negotiations, aeronautical services or car parking.
 - However, some airport performance indicators could present cause for concern if considered in isolation. High international charges at Sydney and Brisbane airports, Sydney Airport's profitability, and high operating costs at Perth Airport show that there is reason to remain vigilant.
 - On balance, most indicators of operational efficiency (including costs and service quality), aeronautical revenue and charges, and profitability are within reasonable bounds. Each airport has generated returns sufficient to enable investment while not earning excessive profits, and passengers consider airports to have good service quality.
 - Airport car park prices are consistent with the costs of service provision (including the opportunity cost of land) and the need to manage congestion. Competition from off-airport car parks and alternative modes of transport are the best constraints on the exercise of market power at on-airport car parking, but effective competition requires landside operators to have access to the terminal on reasonable terms.
- The current approach to airport regulation benefits passengers and the community and remains fit for purpose at this time. But the monitoring regime should be strengthened to enhance transparency over airports' operations and to more readily detect the exercise of market power.
 - Monitored airports should be required to report to the ACCC their revenues and costs from providing domestic and international aeronautical services to airlines. Separate reporting is needed to determine whether aeronautical charges are the result of an airport exercising its market power, or the higher costs of providing international services.
 - Airport operators should be required to provide more information to the ACCC on the terms of landside access to enable greater scrutiny of the airports' performance.
 - Some agreements between airports and airlines contain anticompetitive clauses. These clauses should be removed from all agreements between airport operators and airport users.
- The Commission would not hesitate to recommend regulatory changes, including price regulation, if airports were found to have systematically exercised their market power.
 - An airport-specific negotiate-arbitrate regime that bypasses the safeguards in the National Access Regime would have few benefits and substantial risks. It should not be implemented.
- Regulatory arrangements for airlines to access Sydney Airport should be improved.
 - Airlines should be able to use any peak-period slot for flights servicing regional New South Wales.
 - Measuring the number of actual aircraft movements once (rather than four times) an hour would help to achieve the intended 80 movements an hour, and benefit airlines and their passengers.
 - Alternative types of freight aircraft should be allowed to operate during the curfew, provided aircraft noise and the number of movements are not increased above current levels.
- The structure of the markets to supply jet fuel at the monitored airports has likely led to higher prices to access infrastructure services and higher jet fuel prices. Conditions for competition are improving with some airports and fuel suppliers agreeing on lease arrangements for on-airport infrastructure that include access for third party fuel suppliers.
- Government funding for infrastructure at regional airports should be independently assessed to improve decision making. Governments should also improve capability at council-operated regional airports to enable operators to better manage airport assets.

Overview

The number of passengers travelling through Australia’s airports has more than doubled over the past 20 years, to about 160 million in 2017. The volume of international air freight has increased by about 75 per cent over the same period (figure 1). Most people who use Australian airports travel domestically, but growth in the number of international passengers has outpaced domestic passenger growth every year since 2009. This growth is expected to continue. Tourism Research Australia, for example, forecast that the number of international passengers will grow by about 75 per cent over the decade to 2027. About three quarters of international visitors come to Australia for leisure (on holidays and to visit friends and relatives).

Figure 1 **Passenger and international freight movements**



Increasing passenger demand for air transport has led to increasing demand by airlines for airport services. Changes in the volume and mix of passengers affect the level and type of investments made by airport operators. For example, three of Australia’s major airports have capacity expansions in design or under construction, with new runways due to commence operation at Brisbane Airport (by 2020), Melbourne (2024) and Perth (2028). Airports that are serving an increasing number of international passengers must provide terminal space for security, biosecurity and border processing services, which are typically more costly to

provide than equivalent services for domestic passengers. Some airports, such as Melbourne and Avalon, have built dedicated terminals to meet the needs of low-cost carriers (LCCs).

Similarly, changes in aircraft technology require changes to airports' infrastructure. Airport operators upgraded taxiways, aerobridges and added apron and gate space to accommodate the Airbus A380 in the mid-2000s. Ten years on, airlines are gradually switching from A380s to smaller and more fuel-efficient aircraft that operate more frequently, and require airport services and infrastructure that can support an efficient turnaround on the ground.

Australia's airports are critical infrastructure and airports that face limited competition could have market power that, if exercised, would be detrimental to the community. An airport operator exercising its market power could mean that users of airport services — passengers and airlines — face unduly high charges, poor service quality, or both. The economic regulation of airports must keep that market power in check, while promoting efficient airport (and airline) operations and timely investment in infrastructure.

The economic regulation of airports

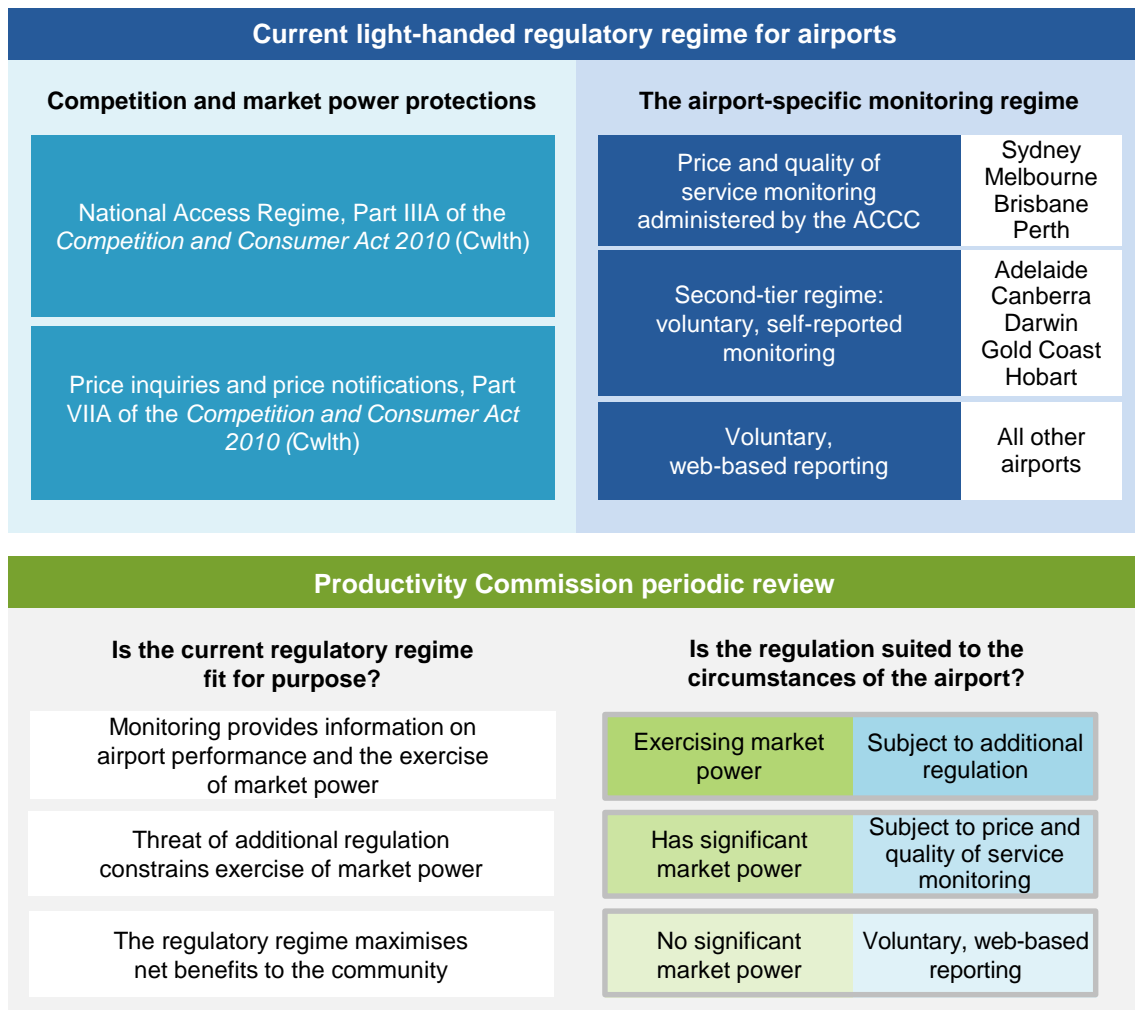
Airports in Australia operate under a light-handed economic regulatory regime that is designed to facilitate commercially negotiated outcomes. Airport users, including airlines and operators of landside services, negotiate directly with airport operators on charges and other terms of access to a range of infrastructure services. Except for some regional services at Sydney Airport, governments do not intervene in the setting of charges or other terms of access.

Light-handed economic regulation is intended to achieve outcomes that would be consistent with those found in markets with effective competition, but will only do so if there is both:

- transparency as to how an airport operator is performing over time, to enable an assessment of whether it is likely to be exercising its market power
- a credible threat of additional regulation if an airport operator is found to be exercising its market power to the detriment of the community.

The light-handed approach to the economic regulation of airports includes the general provisions of competition and consumer law, and airport-specific regulations that were introduced following the privatisation of airports (by long-term lease from the Commonwealth) (figure 2). Sydney, Melbourne, Brisbane, Perth, Canberra, Darwin, Hobart and Adelaide airports, among others, are also subject to a range of lease conditions, including that the lessee must: supply services to air transport operators; invest in airport infrastructure to meet current and expected demand; and obtain ministerial approval of a major development, such as a new runway or terminal.

Figure 2 **The economic regulation of airports**



Assessing airport performance

The Australian Competition and Consumer Commission (ACCC) administers a price and quality of service monitoring regime. The operators of airports subject to the monitoring regime — Sydney, Melbourne, Brisbane and Perth — are required to provide the ACCC with information annually on their prices, costs and profits for aeronautical services and car parking. The ACCC also monitors the quality of some aeronautical services, such as terminal and aircraft services and facilities, and some non-aeronautical services, such as car parking and landside access. At its discretion, the ACCC collects financial information relating to landside access, including revenue and access charges for selected landside services, such as those used by taxis, hire cars and shuttle buses between off-airport car parks and the terminal. Airport operators provide this financial information on landside access voluntarily. The ACCC publishes a report each year, presenting financial and quality information for each monitored airport and outlining general trends and developments across the industry.

The Commission has conducted inquiries into the performance of the economic regulatory regime for Australia's airports approximately every five years, beginning in 2000. Essentially the Commission's role is to conduct a health check of the regime to determine whether it remains fit for purpose. The Commission can recommend (among other things): adding airports to the monitoring regime or removing them; tightening or relaxing regulatory requirements for monitored airports; and sanctions for any airport found to have systematically exercised its market power to the detriment of the community. The Commission recommended changes to the regulatory regime in each of the three previous inquiries and governments, for the most part, have implemented those recommendations.

The second-tier regime — voluntary monitoring

In addition to the ACCC's monitoring of the four major airports, a second tier of airports — Adelaide, Canberra, Darwin, Gold Coast and Hobart — are subject to a self-administered monitoring regime. These airports voluntarily publish information on their aeronautical charges, car parking, service quality and complaint handling procedures. Cairns Airport, which is operated under a 99-year lease from the Queensland Government and is not regulated under the *Airports Act 1996* (Cwlth), voluntarily publishes the same information as the second-tier airports (but does not publish service quality outcomes). The Australian Government established the self-administered second-tier monitoring regime through a policy statement rather than regulation. The policy statement does not set out the level of detail airport operators must provide (the approach is different between airports) or any repercussions for operators who do not participate.

There is a threat of additional regulation

An airport operator that exercises its market power faces the threat of additional regulation. The Australian Government has several regulatory options that it could take if it considered that airports are exercising their market power. It could:

- declare under section 95X of the *Competition and Consumer Act 2010* (Cwlth) (CCA) that an airport is required to notify the ACCC if it intends to increase the price of its services and take into account the regulator's decision on the proposed price change (noting the decision would not be binding on the airport operator)
- require an airport to lodge an access undertaking with the ACCC over one or more of its infrastructure services for a specified period
- deem certain infrastructure services to be declared for the purposes of the National Access Regime under Part IIIA of the CCA
- regulate the price of certain infrastructure services, such as by reintroducing the price-cap approach that applied for five years following the privatisation of airports
- direct the ACCC to conduct a price inquiry under Part VIIA of the CCA into the activities of a particular airport.

The Commission would not hesitate to recommend regulatory changes, including price regulation, if it found in the future that airport operators had systematically exercised their market power to the detriment of the community. The threshold for each regulatory measure is different, and the response could be targeted to one or more airports, but no regulatory action is off-limits. The ongoing threat of additional regulation acts as a deterrent against the exercise of market power.

In addition, an airline, or any other party, can take action if commercial negotiations to access certain infrastructure services fail. A party can apply to the National Competition Council to recommend that the relevant Minister declare those services under the National Access Regime. The Regime provides a role for the ACCC to arbitrate access disputes where a service has been declared and commercial negotiations to access that infrastructure have failed.

What has the Commission been asked to do?

The purpose of this inquiry is to determine the effectiveness of the economic regulation of services provided by airports to passengers, airlines and commercial operators that require landside access to the terminal precinct. The Australian Government has asked the Commission to assess the current regime against the following objectives:

- promoting the economically efficient operation of, and investment in, airports and related industries
- minimising compliance costs
- facilitating commercially negotiated outcomes between airport operators and users.

The terms of reference specify the consideration of aeronautical services at the main passenger airports operating in Australia's major cities. The Commission has focused on domestic and international aeronautical services at the four airports monitored by the ACCC — Sydney, Melbourne, Brisbane and Perth — and airports in the second tier of monitoring, such as Adelaide, Canberra and Gold Coast.

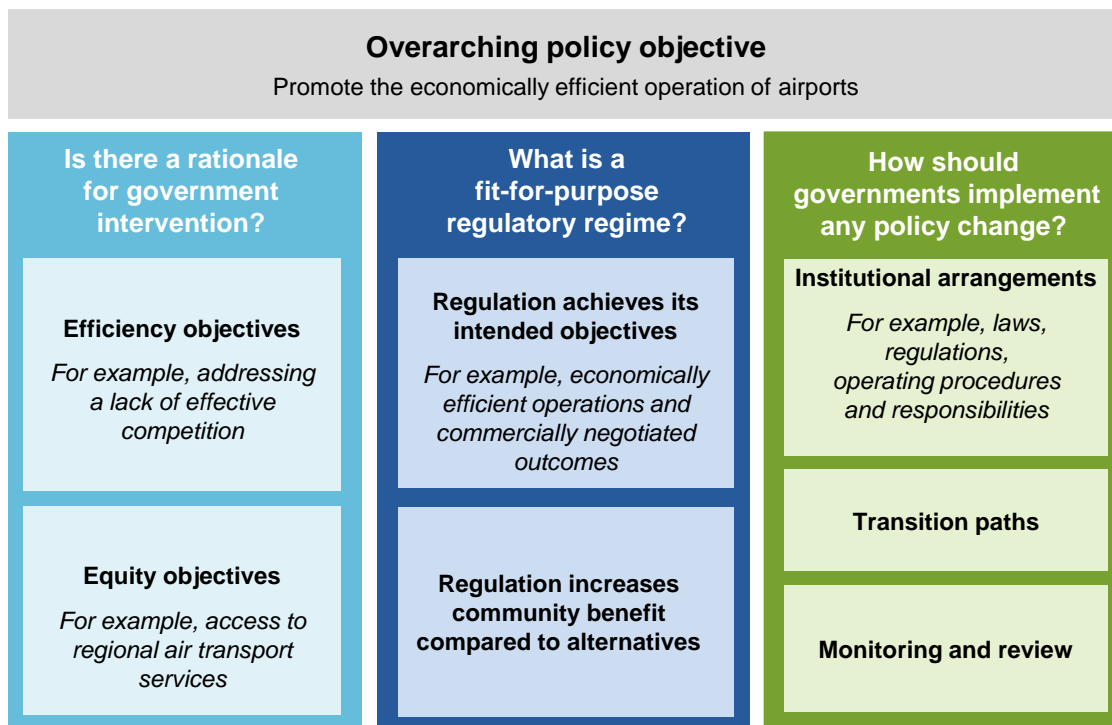
The Commission also examined:

- provision of on-airport car parking and access to the terminal precinct for landside operators at the monitored airports, including taxis and shuttle buses transferring passengers from off-airport car parks
- arrangements for airlines offering regional services in New South Wales to access Sydney Airport
- competition in markets to supply jet fuel.

The Commission’s approach to this inquiry

The Commission has analysed each issue in a consistent manner according to the framework presented in figure 3. The Commission has considered the case for government intervention, whether the current approach to economic regulation is fit for purpose, or whether there are alternatives that would result in greater net benefits for the community.

Figure 3 **Assessing the economic regulation of airports**



The rationale for the economic regulation of airports is that the operator of an airport with market power could *exercise* that power by setting unduly high charges for airport services, operating the airport inefficiently, or making inefficient investment decisions. The Commission assessed whether airport operators have exercised their market power to the detriment of the community based on indicators of airports’ operational and financial performance, and the conduct of commercial negotiations between airport operators and service users. This assessment also considered the constraints an airport operator faces, including the countervailing power of airlines, which limits an operator’s ability to exercise its market power. Some inquiry participants have proposed alternative approaches. The ACCC, for example, considered that the existence of market power was sufficient rationale for additional economic regulation, and that an unconstrained monopoly with market power will use that power.

The test for any policy change is whether it would generate the greatest increase in the welfare of the Australian community compared with other options, including the status quo.

The mere fact that an airport has market power is insufficient to justify a change to the regulatory regime. Regulation has costs and intervention to address market power where airport operators are unable to exercise that power will likely lead to net costs for the community.

Australia's four largest airports have significant market power

The competitive constraints faced by an airport operator determine whether it has market power. These constraints include potential market entry by competitor airports, opportunities for airlines (or other airport users) to switch to another airport, and the nature of passenger demand for air travel.

Even if an airport has market power, its ability to *exercise* that power may be limited. Constraints on an airport's exercise of market power include countervailing power, airline bargaining power more broadly, and the level of demand for airport services.

Countervailing power can be an effective constraint on an airport's effort to exercise its market power when an airline can credibly threaten to reduce demand for an airport's services. An airline could, for example, bypass the airport, reduce the range of services it uses, or change (even at the margin) parts of its operations, including its aircraft types and schedules.

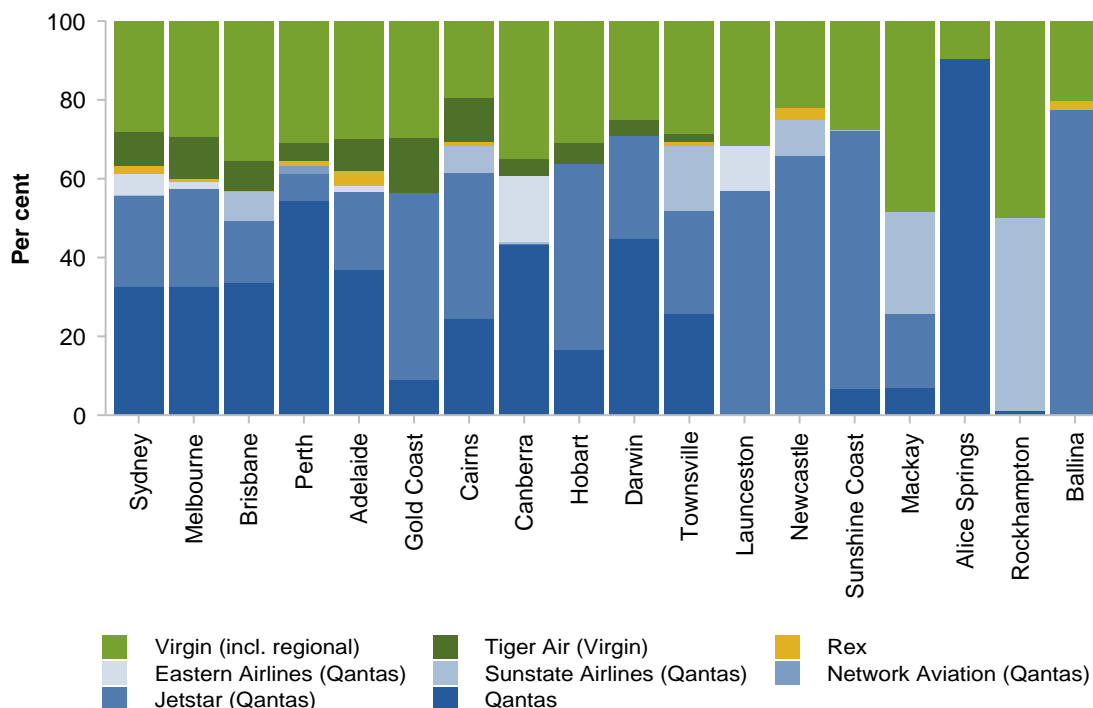
A threat to withdraw or substantially reduce demand for airport services is more credible where the airline has a large proportion of the airport's business, so the degree of countervailing power differs by airline and by airport. The market for domestic air transport services in Australia is highly concentrated. Together Qantas Group, Virgin Australia Group and Regional Express (Rex) accounted for over 95 per cent of all domestic regular public transport flights. Qantas Group is the dominant player in the domestic market accounting for about 60 per cent of all passenger movements in Australia and the majority of passenger movements at Australia's largest airports in 2017 (figure 4).

A threat will be more credible if an airline has previously acted on a threat (at this or another airport) or has otherwise signalled it is prepared to take a strong negotiating stance.

An airline's threat to withdraw or substantially reduce services at an airport is less credible when the airline has competitors that can meet any gap in demand for the airport's services. All of the monitored airports are served by multiple airlines. In contrast, most of the regional airports for which the Commission has data are serviced by a single regular public transport airline. Thus, in practice, complete withdrawal of services on a route is more likely to occur at regional airports. For example, Rex withdrew services on the Mildura–Sydney route in response to what it described as 'exorbitant' charges. The airline stated that it redeployed resources to Griffith, in New South Wales, as part of a five-year agreement with Griffith City Council, although Rex maintains flights to Mildura from Melbourne and Adelaide.

Figure 4 **Domestic air transport services are concentrated**

Share of domestic passenger market, by airline



More broadly, an airline’s bargaining power with an airport can also limit an airport’s ability to exercise its market power. Besides reducing demand for an airport’s services, other factors that improve an airline’s bargaining position include its ability to:

- leverage Commonwealth lease conditions that limit the circumstances where an airport operator can deny access to aeronautical services (even when negotiating parties disagree on charges or other terms of access, as discussed below). This provides airlines with an incentive to delay concluding commercial negotiations with, and potentially to delay payment to, airport operators until a more favourable outcome is reached
- engage in lobbying (for example, through media) to achieve a more favourable outcome
- apply for an infrastructure service to be declared under the National Access Regime, which, as noted above, can lead to arbitration by the ACCC to determine terms of access.

Wielding bargaining power in negotiations can result in commercial consequences for either party. For example, following the expiry of its commercial agreement, Qantas Group refused to pay charges at the level proposed by Perth Airport because it considered them unjustified. As a result, Perth Airport commenced action against Qantas Group in the Supreme Court of Western Australia in December 2018, stating that the difference between what the airport charged and the airline group had paid between July and September 2018 was in excess of \$11 million. These legal proceedings were ongoing at the time this inquiry report was submitted to the Australian Government.

The Commission has considered the range of competitive constraints, including airlines' countervailing power, in its assessment of which airports have market power. It found that Sydney, Melbourne, Brisbane and Perth airports have significant market power in the provision of domestic aeronautical services, creating a *prima facie* case for regulatory intervention.

- Sydney Airport:
 - is a geographic monopoly (at least until Western Sydney Airport commences operation after 2026)
 - is the gateway to Sydney, which is a significant business hub and highly differentiated product in domestic (and international) tourism markets; passengers are less likely to substitute to another destination
 - has few modal substitutes, with the exception of the Sydney–Canberra route, which accounts for less than two per cent of total domestic passenger movements at Sydney Airport.
- Melbourne Airport services Melbourne which, like Sydney, is a business and tourism hub; passengers are less likely to substitute to another destination. There are no strong modal substitutes for the majority of its passengers and it faces little competitive constraint from Avalon Airport, even in the market to serve LCCs.
- Brisbane Airport faces competition for some domestic services — Gold Coast and Sunshine Coast airports could theoretically service up to about 90 per cent of its passenger movements. In reality, these two airports are imperfect substitutes for Brisbane Airport as flight times and schedules, facilities and travel time to Brisbane vary significantly.
- Perth Airport is a geographic monopoly with few modal substitutes — 94 per cent of interstate overnight domestic visitors to Western Australia use air transport. However, Perth is less of a business and tourism hub compared to other major cities (especially following the end of the resources boom).

In addition, Sydney, Melbourne, Brisbane and Perth airports have significant market power in international aeronautical services, also creating a *prima facie* case for regulatory intervention. They are — to varying extents — gateways to cultural, business and tourism hubs and, for many passengers travelling from overseas, are not readily substitutable for other locations. Further, the market for international flights is highly competitive, reducing the potential for airlines to exert countervailing power.

Airports in the second-tier of monitoring do not have significant market power

The Commission considers that the airports that participate in the second-tier regime — Adelaide, Cairns, Canberra, Darwin, Gold Coast and Hobart — do not have significant market power and should not be added to the monitoring regime at this time.

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- Adelaide Airport serves a relatively higher proportion of leisure passengers than the monitored airports. Leisure passengers are more responsive than non-leisure travellers to increases in charges (which reduces the airport's market power).
 - Canberra Airport has a high proportion of non-leisure passengers, which tend to be relatively insensitive to price changes. However, there is good availability of road transport alternatives for the Canberra–Sydney route — a route that is equivalent to one third of passenger movements at Canberra Airport.
 - Gold Coast, Cairns, Hobart and Darwin airports do not have a level of market power that warrants regulation — these airports are not gateways to major business hubs and they serve a relatively higher proportion of leisure passengers than the monitored airports.

The competitive constraints faced by an airport operator change over time, so an airport that currently does not have significant market power could do so in the future. The Commission will again examine which airports have market power in its next inquiry into airport regulation.

The information published by airports in the second-tier regime is not required for future assessments of market power. In the draft report the Commission stated that government agencies, industry bodies and other stakeholders do not make use of this information — no party has disputed that conclusion. The second-tier monitoring regime serves no purpose and should be discontinued.

Regional airports are unlikely to exercise, or even have, market power

Many of Australia's regional airports are serviced by, at most, a single regular public transport airline and have relatively few passengers each year. Low demand for services means that operators of many regional airports are unable to cover their operating costs. It is not clear how many regional airports run at a loss because data on the profitability of regional airports are sketchy. A 2016 report commissioned by the Australian Airports Association found that more than half of the regional airports in the sample of 36 did not cover their operating expenditures in 2014-15.

Of those profitable regional airports, some, such as Hervey Bay, cater to the tourism industry and others play an important role in the resources sector providing services to charter aircraft. This means that some regional airports will have market power, but they will be unlikely to be able to exercise it for reasons that include:

- the relatively lower barriers to entry for small scale private airports that support construction and extraction activities in the resources sector
- countervailing power from airlines — of the 103 airports for which the Commission has data, 53 are serviced by only one airline offering regular public transport services
- competition from other airports in tourism destinations.

Regional airports that cannot cover their operating costs do not have market power, let alone the ability to exercise it — the aeronautical charges needed to cover the cost of running the

airport are higher than what passengers and airlines are willing to pay. Concerns raised by participants about unjustified infrastructure investments and unduly high aeronautical charges at regional airports are more likely to reflect poor decision making and governance than the exercise of market power (discussed below).

Negotiating agreements between airports and airlines

Airport and airline operators typically engage in commercial negotiations to secure aeronautical and terminal agreements on charges, types of services, service quality and future capital investments. Typically these agreements outline service charges, including price paths for future access, consultation requirements, dispute resolution arrangements, charges to recover passenger security screening costs, and discounts on scheduled aeronautical charges if, for example, agreed passenger numbers are reached. Negotiating agreements for airport services is challenging — it is time consuming, resource intensive and costly, and the argy bargy between airports and airlines sometimes plays out in the media. This is in part because agreements can involve complex and contested investments that affect many parties, including competing airlines, with different objectives.

An infrastructure operator that exercises its market power during negotiations could, for example:

- deny access to the service (or credibly threaten to)
- refuse to provide sufficient and timely information to negotiating parties to assess the service offer
- make take-it-or-leave-it offers on charges and other terms of access that are accepted by negotiating parties, given an inability to negotiate any alternative
- set charges above the long-run average cost of provision — the minimum an infrastructure operator can charge to ensure it remains viable over time (and a benchmark for economic efficiency).

The Commission is satisfied that, on balance, airports have not systematically exercised their market power in commercial negotiations with airlines. There are several reasons for this.

First, airports have strong incentives to reach agreements with airlines, especially given the need for new investments to meet demand growth. Agreements underpin cash flow and other measures of financial performance that support investor certainty. As discussed above, Commonwealth lease conditions require airports to supply services to air transport operators, with limited exceptions. This means that airlines can pay existing (or sometimes lower) charges and continue to access airport services if an agreement has expired and parties have not yet reached a new agreement. The Commission heard, for example, that Qantas Group does not pay charges it does not agree to. Other airlines have also previously refused to pay charges at the level determined by airports.

Second, negotiating agreements is information intensive. Airport operators often use a building block model, where charges are ‘built up’ based on an airport’s expected costs. Use of this model indicates that airport operators consider it necessary to justify their prices during negotiations. Airlines are able to test each block of the model for reasonableness, and this can be a highly contentious process.

Third, the evidence provided to the Commission does not indicate that airport operators make take-it-or-leave-it offers to airlines *and* that airlines are compelled to accept them. In practice, airlines have more mobile capital than airports and can strengthen their bargaining position in negotiations if they can credibly threaten to reduce demand for an airport’s services. Threatening to reduce services, and the ability to carry out that threat, means that Qantas Group, Rex and Virgin Australia Group can have countervailing power at airports. Where this is the case, airports have limited ability to exercise their market power using take-it-or-leave-it offers.

Fourth, the operational and financial performance of the monitored airports does not indicate they are systematically exercising their market power in aeronautical services by setting charges above efficient levels (discussed below).

Airports have not systematically exercised their market power in negotiations with airlines, but the negotiation process could still be improved. Both airlines and airports have suggested a need for a set of agreed negotiating and contracting principles, including standard contract clauses and performance incentives for airports. Parties could voluntarily pursue these principles through industry-led measures, or request that the Australian Government facilitate this process.

Anticompetitive clauses should be removed from all agreements

Some agreements between airport operators and airlines contain anticompetitive clauses that:

- establish financial disincentives or loss of contractual rights if an airline is involved in a declaration application under the National Access Regime — these clauses could reduce the effectiveness of the regulatory regime by reducing the threat of declaration
- restrict an airport operator’s ability to offer lower charges or other incentives to airlines other than the signatory airline — these ‘no less favourable’ clauses seek to limit competition in both domestic and international markets, and protect the incumbency of an airline that has negotiated these favourable terms.

The Australian Government should amend the *Aeronautical Pricing Principles* (which are used by airports and airlines as guidelines during the negotiation process) to specify that any agreement between an airport and an airport user must not contain anticompetitive clauses. To deter the use of these clauses in agreements, the Australian Government should stipulate in the terms of reference for any future Productivity Commission inquiry that the monitored airports, on request, make their agreements with airport users available to the Commission on a commercial-in-confidence basis.

Airports' operational and financial performance

The Commission examined indicators of the monitored airports' operational and financial performance that could be consistent with the exercise of market power, including:

- operational efficiency — whether an airport provides aeronautical services that reflect efficient costs and input utilisation, and are of a quality that meets users' reasonable expectations
- aeronautical revenues and charges — whether the prices of aeronautical services reflect efficient costs
- profitability — whether an airport's returns are reflective of the cost of capital, accounting for the long-term nature of airport investments and operational constraints.

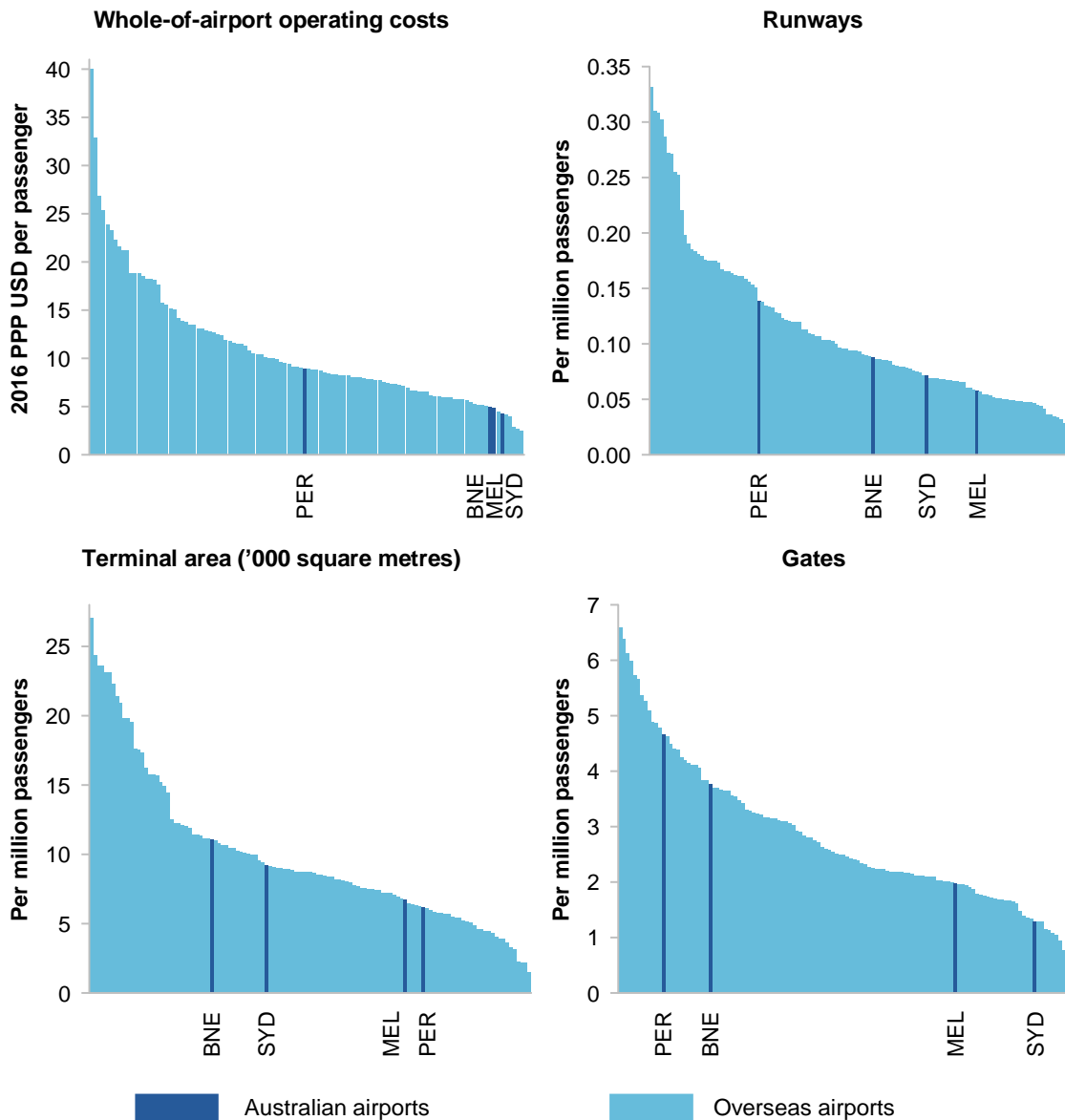
Airports' performance in aeronautical services was examined separately from non-aeronautical services. Some airline participants in the inquiry suggested that airports' performance should be assessed as a whole, with aeronautical and non-aeronautical revenues, costs and profits considered together. However, this approach would obscure important detail. Analysing whole-of-airport performance could reveal whether an airport's total profits exceed some benchmark, but would not show whether profits could be attributed to the exercise of market power in aeronautical services specifically. The Commission would not be able to identify areas of concern or recommend targeted regulatory solutions if it had taken the whole-of-airport approach.

The Commission did not set benchmarks for individual indicators. Each airport has different circumstances so it is not practical (or sensible) to define a benchmark for each indicator that would signal an exercise of market power at each airport. Instead, the Commission assessed indicators of airport performance over time, and relative to comparable airports in Australia and overseas, to determine whether the *indicator* could be consistent with the exercise of market power. It then assessed whether the *overall performance* of each airport in aeronautical services could be consistent with the systematic exercise of market power.

Sydney Airport is profitable and efficient

Sydney Airport has limited space to expand and its operations are constrained by regulatory caps on aircraft movements and a curfew. There is congestion at peak times, but the airport has low operating costs and uses its assets intensively (figure 5). Passengers rated Sydney Airport's service quality relatively well, although airlines rated it poorly.

Figure 5 Australian and overseas airports — operating costs and input utilisation, 2016

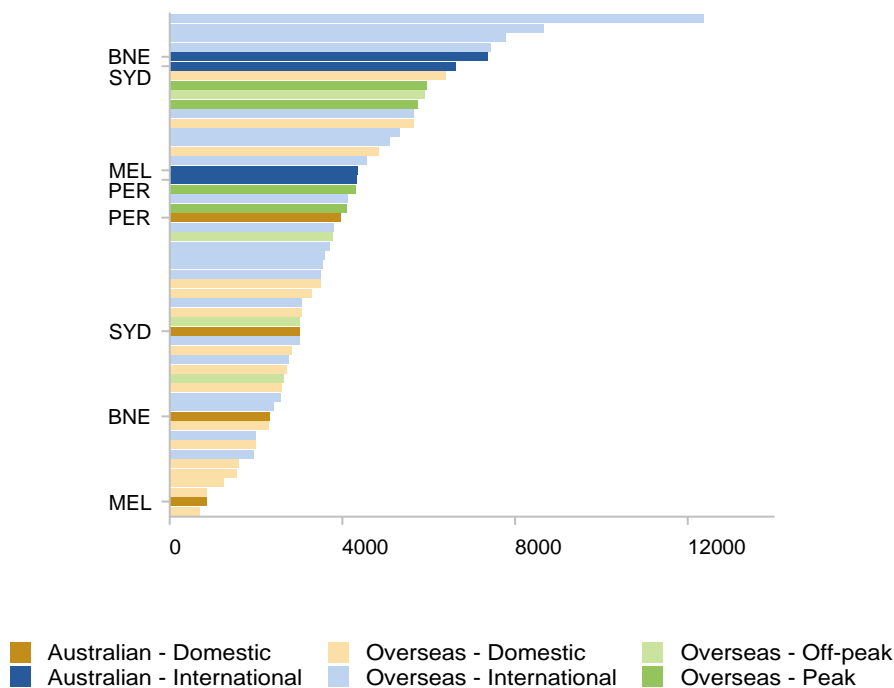


Aeronautical charges for domestic services at Sydney Airport are higher than those for Melbourne and Brisbane airports, but are not particularly high by international standards and have been relatively stable in recent years. Charges for international services increased more rapidly and are high when compared with overseas airports (figure 6). The divergence in growth rates between international and domestic charges could reflect the higher levels of competition, and lower levels of airline countervailing power, in the downstream market for international air transport. It could also be explained by the higher capital and operating costs of providing international aeronautical services. More information on domestic and international costs would help determine whether high international charges reflect higher costs of servicing international passengers.

Figure 6

Australian and overseas aeronautical charges

Airport turnaround costs for a Boeing 737-800 in purchasing power parity US dollars (current published schedules)



In the past four years Sydney Airport earned the highest return on aeronautical assets (ROAA) of the monitored airports (11–12 per cent) (figure 7). The Commission does not consider these profits to be a result of the systematic exercise of market power. Taking a ten-year timeframe to better account for cyclical factors and lumpy investment, Sydney Airport’s ROAA averaged 10 per cent per year — less than Melbourne and Perth airports, which averaged about 11 and 12 per cent per year, respectively. The level of returns at Sydney Airport also reflect its limited opportunities to invest. Passenger demand has grown more rapidly than the asset base, which has led to increasing returns on its existing assets.

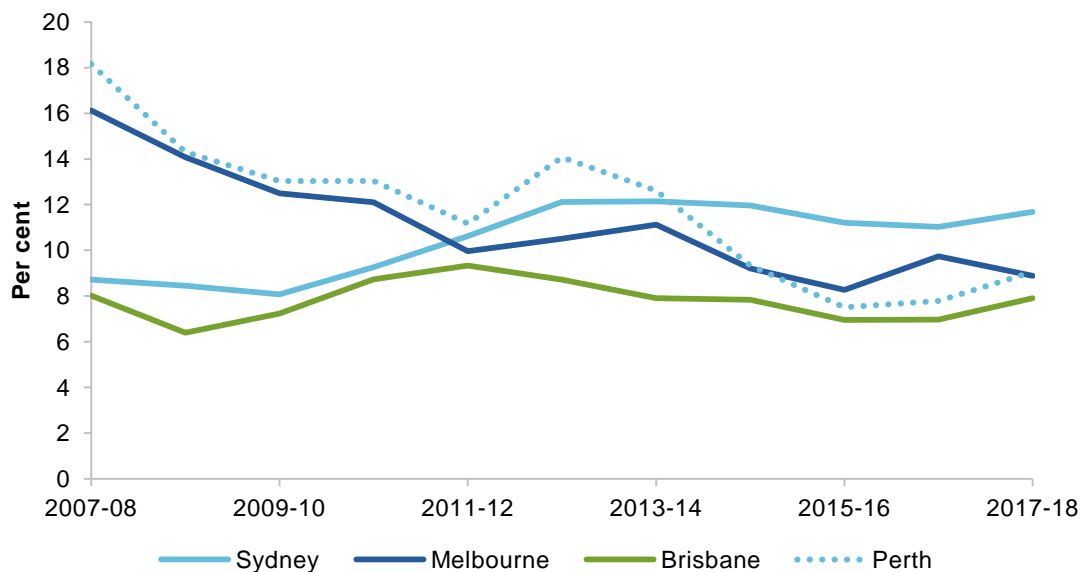
Sydney Airport’s ROAA could continue to increase if current regulatory constraints remain in place and demand for Sydney Airport’s aeronautical services continues to grow. With scarce capacity, increasing charges could be an efficient way to ration access to services, so increasing returns will not necessarily indicate the airport is exercising its market power. The addition of Western Sydney Airport will affect Sydney Airport’s future passenger growth and put competitive pressure on Sydney Airport’s charges, revenues and profits.

Sydney Airport clearly belongs in the monitoring regime — it has significant market power and its ROAA and aeronautical charges for international services are currently relatively high. Taken as a whole though, the indicators of Sydney Airport’s performance do not suggest that it has systematically exercised its market power in aeronautical services.

Melbourne Airport has invested to deal with growing demand

Melbourne Airport has a relatively high level of operational efficiency, although on-time performance at Melbourne Airport fell to its lowest point in the past eight years. The airport uses its assets intensively (figure 5) and delivers relatively good service quality. Melbourne Airport has made continued investments to meet increasing demand, but this has led to a reduction in its ROAA — from about 16 per cent in 2007-08 to less than 10 per cent for the past four financial years (figure 7).

Figure 7 Return on aeronautical assets



Trends in Melbourne Airport’s aeronautical charges do not reflect the systematic exercise of market power. Although international charges have increased somewhat faster than domestic charges, they are in line with overseas airports (figure 6). Overall, the Commission is satisfied that Melbourne Airport has not exercised its market power in aeronautical services to the detriment of the community.

Brisbane Airport has high international charges but moderate profitability

Brisbane Airport’s scheduled aeronautical charges for international services are the highest of the monitored airports, and are also high when compared with overseas peers (figure 6). It had a large increase in international charges, which could reflect one or more of the following factors: exercise of market power for international aeronautical services; divergence in costs to process domestic and international passengers; and recovery of

investment costs. Brisbane Airport justified its international charges as being reflective of recent investment in international terminals and runway capacity.

Brisbane Airport's total costs per passenger increased significantly from 2007-08 to 2017-18, but were much lower than Sydney and Perth airports. Brisbane Airport's overall service quality rating was the highest of the monitored airports in 9 of the past 11 years, although its average airline rating has been trending downwards (figure 8).

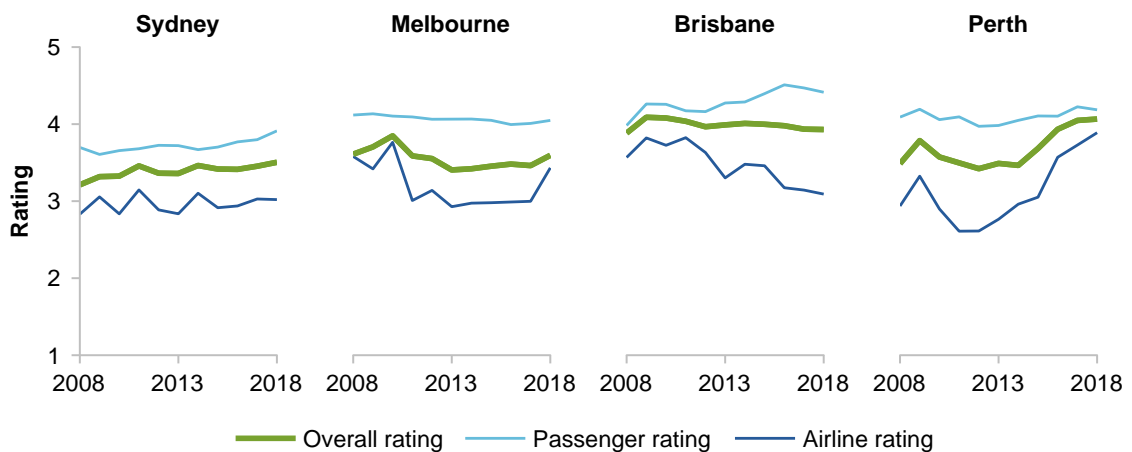
In any case, high international charges have not translated into higher profitability, with Brisbane Airport's ROAA seldom exceeding 8 per cent in the past decade (figure 7). Its moderate profitability performance and high charges would be more of a concern if they were coupled with poor operational performance but, as this is not the case, there is no suggestion that market power is being exercised at Brisbane Airport.

Perth Airport's performance can be explained by investment decisions

Perth Airport invested more heavily than the other monitored airports. It opened a dedicated regional terminal in 2013 and a new domestic pier in 2015. However, unlike the other monitored airports, there was an unexpected fall in passenger numbers at Perth Airport following the end of the resources boom.

The investment in new infrastructure has led to mixed performance on different indicators of operational efficiency. Perth Airport has the highest operating costs per passenger and the lowest rate of input utilisation of the monitored airports (figure 5). However, Perth Airport had the greatest improvement in the ACCC's quality of service ratings since 2011-12, largely because of an improvement in survey ratings from airlines (figure 8).

Figure 8 **Average quality of service ratings from ACCC monitoring**
Financial year



Perth Airport's investments were accompanied by a more than 100 per cent increase in domestic scheduled charges from 2011-12 to 2016-17. Perth Airport stated that this large increase was to fund the construction of the two new terminals, and that domestic charges were reduced by 39 per cent in real terms in 2018-19.

Investment has also influenced Perth Airport's ROAA. The airport's aeronautical asset base quadrupled in real terms from 2007-08 to 2017-18. This investment, combined with lower passenger numbers in recent years, contributed to its ROAA falling from 18 per cent in 2007-08 to 9 per cent in 2017-18.

Some of the investments undertaken by Perth Airport were supported by airlines and, to the extent that they were completed at a reasonable cost, these findings do not suggest that Perth Airport has exercised its market power.

No systematic problem but airport performance requires more scrutiny

Overall, the evidence does not suggest that the monitored airports have systematically exercised their market power in aeronautical services to the detriment of the community. Some financial indicators could be consistent with the exercise of market power, when taken in isolation. In particular, the high international charges at Sydney and Brisbane airports, Sydney Airport's profitability, and the high operating costs at Perth Airport show that there is reason to remain vigilant.

On balance, most indicators of operational efficiency (including costs and service quality), aeronautical revenue and charges, and profitability are within reasonable bounds. Each airport has generated returns sufficient to enable investment while not earning excessive profits, and passengers consider airports to have good service quality. There is no justification for significant change to the current form of regulation of aeronautical services at these airports. The Commission is, however, recommending improvements to the monitoring regime to enhance transparency over airports' operations and to more readily detect the exercise of market power.

Car parking prices at the monitored airports

Passengers can choose from a range of options to get to and from the airport. Many passengers are dropped off and picked up at the terminal by taxis, rideshare services or family and friends, or use public transport. Passengers who want to use their own cars can park in airport-operated car parks (either at-terminal car parks which are adjacent to the terminal or at-distance car parks that provide a shuttle bus service). They can also use independently owned off-airport car parks that have shuttle bus connections to the airport.

Airport operators have market power in at-terminal car parking — they are the only provider and there are no substitutes for people who want the convenience of parking within a short

walk to the terminal. Independent off-airport car parks provide a similar service to airport-operated at-distance car parking, and their competition acts as a constraint on airports' market power in that service.

Some car parking prices at the monitored airports fell over the period 2010-11 to 2017-18, while others increased. The Commission examined the factors that influence airport car parking prices at the monitored airports and found that prices are consistent with the fixed and variable costs of service provision (including the opportunity cost of land), the need to manage congestion at highly sought after parking facilities, and the value users place on the convenience of parking within a short walk to the terminal.

- Evidence does not suggest that airport operators have deliberately restricted the supply of on-airport car parking to inflate prices.
- Revenue per vehicle increased at a slower rate than operating costs per vehicle between 2010-11 and 2017-18.
- Airport operators use price to ration demand for car parking spaces close to the terminal. Using price to ration car park spaces can be an efficient way to allocate limited car parking spaces to the consumers who value them most, provided airports do not *deliberately* underinvest in infrastructure to restrict the supply of car parking. The alternative — a lower price — would result in queuing and more congestion.
- Passenger surveys show that service quality of car parking remains acceptable.

Evidence also shows that the price of airport car parking reflects the premium consumers are willing to pay to access limited car parking close to terminals — this is also consistent with efficient pricing. The price of car parking close to entertainment and sporting venues is broadly comparable to airport at-terminal car park prices, particularly for short-term use and when events are taking place (figure 9). At airports and at other venues people value proximity and are prepared to pay a premium for access to limited space.

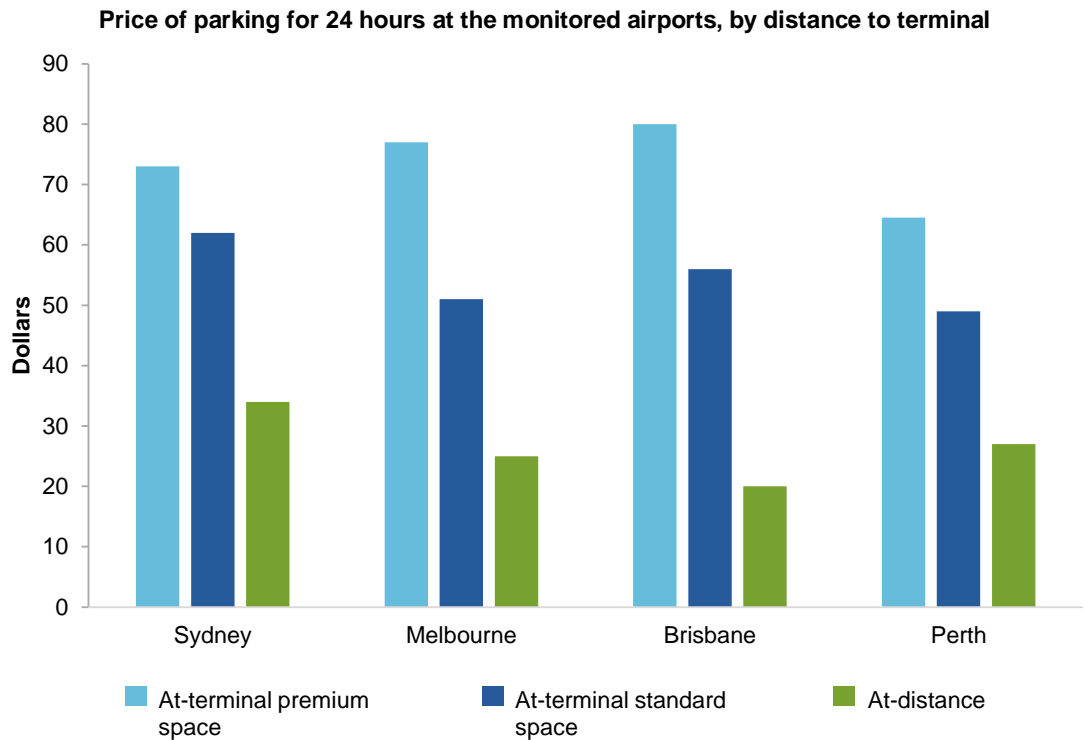
The contribution of car parking revenue to airports' profits attracts considerable public attention. However, regulatory intervention to lower car parking prices would have costs — it could lead to increased congestion and reduced investment by airport operators in car parking infrastructure.

The most effective constraint on airport operators exercising their market power in car parking is to ensure that consumers have choice and airports face robust competition from alternative modes of transport. Airports have taken some steps to increase access for alternatives, including by providing facilities and space for rideshare services and free waiting areas for meeters and greeters. The widespread adoption of smartphones has also made it easier for consumers to compare options and prices, and access online discounts.

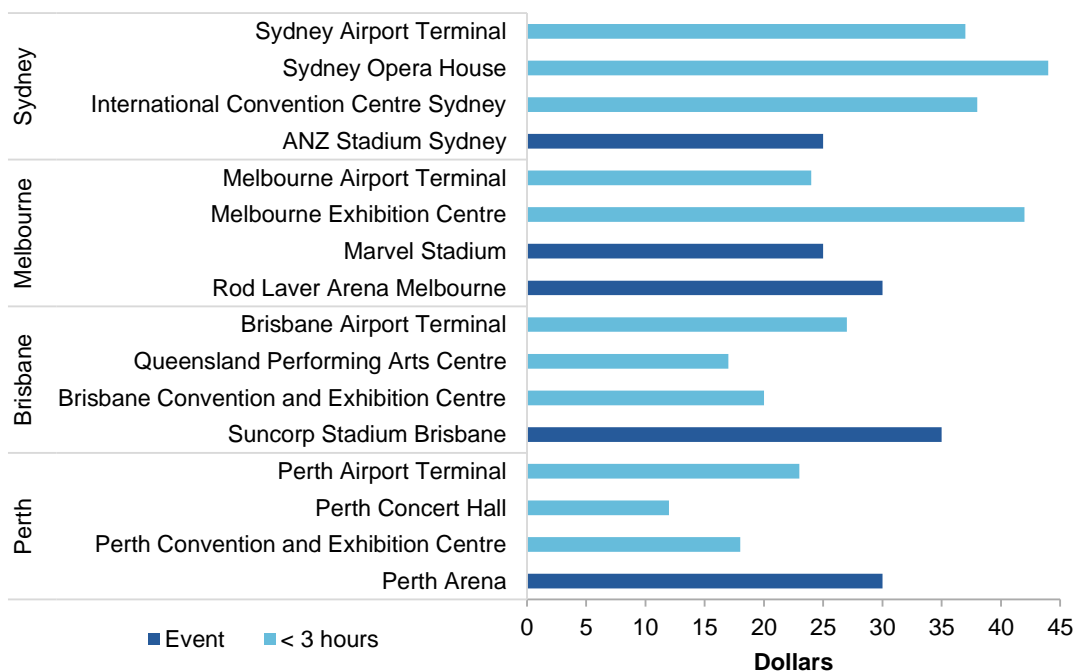
The Commission is recommending reforms to the monitoring regime to keep up with developments in car parking and landside access, and to ensure that the regime enables adequate scrutiny of airport car parking and landside operations (discussed below). Ongoing

scrutiny is an important check on the ability of airports to limit competition from other modes of transport and other providers of car parking services.

Figure 9 Car park users value proximity



Car park prices at airports, selected entertainment and sporting venues



Data on some aspects of landside access are inadequate

Airport operators are able to exercise their market power in negotiations to access landside services, and by setting higher than efficient charges and unreasonable terms of access to the terminal. Airport operators could benefit by reducing the competition they face from landside operators and increasing the demand for on-airport car parking.

Inquiry participants raised concerns about airports' behaviour in landside access including inadequate consultation with landside operators, the use of take-it-or-leave-it offers during negotiations, poor service quality and unreasonable access charges. Airport operators have argued (supported by evidence) that they consult with operators when undertaking infrastructure investments and setting terms of access to the terminal precinct.

The Commission is mindful that ground transport operators have less bargaining power than airlines — they have no ability to switch to an alternative provider. This means that airport operators can make take-it-or-leave-it offers, but this is not necessarily reflective of an exercise of market power. Bilateral negotiations for bespoke arrangements with multiple landside operators are not always practical. Airport operators cannot satisfy every landside operator seeking access to limited forecourt space while meeting safety and efficiency objectives. Based on the evidence, the Commission considers that airport operators have not systematically exercised market power in negotiations with landside operators.

Airports have supported the introduction of new ground transport services, such as rideshare, and have provided facilities to enable their operation. Reported quality of service has also been within a reasonable range at the monitored airports (although there is scope for improvement at Sydney Airport) and has not deteriorated despite increases in the demand for kerbside space over time. The evidence shows that airports' investment in landside infrastructure has been reasonable and they have supported competition in ground transport options to and from the airport precinct. Airports have also worked with governments to improve land transport links, including the capacity of roads and adequacy of public transport services to airports.

Like car parking, landside access charges are influenced by capital and operating costs, the need to manage congestion, and the efficient operation of the terminal forecourt. The available evidence suggests that the *structure* of landside access charges appears to be consistent with efficient operations, but the Commission is unable to be definitive about the efficient *level* of charges due to inadequate data. Changes to the monitoring regime to collect more data on landside access would inform future assessments of whether airport operators have exercised market power in setting landside access charges.

Reforming the monitoring regime

Sydney, Melbourne, Brisbane and Perth airports have market power in domestic and international aeronautical services at levels that justify regulatory oversight — they should

continue to be monitored. Other capital city airports and airports in regional centres have less (or no) market power and should not be subject to increased monitoring at this time.

The Australian Government should continue with the current light-handed approach to economic regulation. The pillars of the regime should remain in place, including annual price and quality of service monitoring administered by the ACCC and periodic reviews by the Productivity Commission — both are critical to deliver transparency over airports' operations and to maintain a credible threat of additional regulation. The combination of the monitoring reports and Commission reviews allows a regular assessment of the performance of airports, whether an airport should be added to the monitoring regime (or removed from it), and whether a monitored airport should be subject to additional regulation.

Significant changes to the regulatory regime are not justified at this time, but the monitoring regime should be enhanced to increase the scrutiny of airport operators' behaviour and ensure that any airport that exercises its market power will be more readily detected. The Commission is therefore recommending reforms to improve the level of detail in the monitoring reports.

More detailed reporting on airports' operations

International passenger numbers have grown faster than domestic passenger numbers at the monitored airports over the past decade. Airports are providing a different mix of services to airlines and passengers, and the sources of airports' revenues and costs have changed. Airport charges for international aeronautical services are significantly higher than charges for domestic services — airport operators stated that providing international services is more costly but the Commission cannot verify this because, currently, the ACCC does not publish separate data on the costs or revenues associated with domestic or international services. The Commission is recommending separate reporting of costs and revenues in relation to domestic and international aeronautical services to determine whether charges are the result of an airport exercising its market power, or the higher costs of providing international services.

The Commission recognises that there are challenges in disaggregating the costs of providing aeronautical services. Some operating and capital costs can be directly attributed to international or domestic services, and should be reported as such. The costs of common-use infrastructure (such as costs related to runways or shared terminal infrastructure) should be reported as common costs. Airport operators should be required to disclose to the ACCC any methods they use to allocate common costs between domestic and international services.

The enhanced monitoring regime will assist the ACCC, the Commission and other parties to monitor the relationship between the costs of providing aeronautical services and the airports' charges for those services. The information could also assist airport users in their commercial negotiations.

The ACCC's indicators of aeronautical service quality were last updated in 2013 and are due for revision. The Australian Government should direct the ACCC to consult with airports and airport users on quality of service indicators for aeronautical services, with a view to updating the set of indicators that are used in its annual monitoring reports.

The Commission identified gaps in the monitoring regime as it applies to car parking and landside access. The Australian Government should require airport operators to provide the ACCC with separate information on the number of users of at-terminal and at-distance car parking, and the revenues and costs associated with these services. Airport operators should also be required to provide information on the number of people that use various landside access services (such as taxis, shuttle buses and public transport) and the charges, revenues and costs associated with each service type.

The benefits of updating the monitoring regime outweigh the costs

Monitored airports generally supported the Commission's draft recommendations to improve the monitoring regime, with the caveat that, in some cases, disaggregated data on aeronautical revenues could be used to back out commercially sensitive information. The Commission has revised its recommendation to safeguard against this.

Improving the monitoring regime would also entail additional administration costs for the ACCC and compliance costs for the monitored airports — these costs are expected to be modest and less than the benefits of increased oversight. The impost on the ACCC would be small and airports should be able to extract most of the additional data from their financial reporting systems.

Other reform options canvassed during this inquiry that would have greater costs and risks than the Commission's recommendations are discussed in the body of this report. An airport-specific negotiate-arbitrate model supported by airlines, their representative Airlines for Australia and New Zealand (A4ANZ), and the ACCC was the reform option that featured most prominently in consultations, submissions and hearing testimonies. The Commission has considered the merits of the proposal and has set out its assessment below to inform future discussions.

An airport-specific negotiate-arbitrate regime — risky with few benefits

A user (or potential user) of airport infrastructure can apply to the National Competition Council for the service to be declared under the National Access Regime if agreement cannot be reached with the airport operator on reasonable terms. The declaration criteria, along with the opportunities for merits and judicial review, are safeguards to ensure that arbitration is only available when it would encourage competition and promote the public interest. The CCA establishes matters that the ACCC, as the arbitrator, must take into account when making a determination. These arbitration rules ensure that one access seeker cannot use

arbitration to restrict a competitor's access to the service, or require a competitor to bear the costs of extending the infrastructure facility, among other things.

Bypassing checks and balances when market power has not been exercised

Airlines, A4ANZ and the ACCC suggested introducing an airport-specific negotiate-arbitrate framework that would skip over the declaration stage of the National Access Regime, giving an airport user access to arbitration (by a commercial arbitrator) at any time it considered that negotiations were not leading to a favourable outcome. A4ANZ submitted a draft design of a proposed model that it stated would not deviate significantly from the National Access Regime were an arbitration to occur. The Commission disagrees and has identified some important differences between the A4ANZ model and the National Access Regime.

First, the A4ANZ proposal defines the scope of the proposed regime as 'core regulated airports', whereas the scope of the National Access Regime is determined on a case-by-case basis that involves applying the declaration criteria (among other things) to the infrastructure service. Airline participants argued that getting an infrastructure service declared under the National Access Regime is time consuming, costly and uncertain, and that an easier path to arbitration is needed to 'level the playing field' in negotiations with airport operators.

The Commission has a different view. The Australian Government established the declaration criteria to promote competition and the public interest — they are essential regulatory tests to ensure arbitration is available when it would be beneficial to the community, not obstacles to be avoided at the discretion of an airline. The A4ANZ proposal would impose a negotiate-arbitrate framework on the monitored airports even though the evidence does not support a conclusion that they have *exercised* their market power to the detriment of the community. It would also apply to airports, such as Gold Coast and Hobart, that *do not* have market power. There would be no requirement to demonstrate that arbitration would promote competition or the public interest.

Second, the A4ANZ proposal does not include access to administrative or judicial review, which are available for decisions under the National Access Regime.

Overriding the declaration and appeal processes would not 'level the playing field' — it would be inherently unbalanced in favour of airlines. An arbitrator would be able to compel airports to provide services to airlines at the arbitrated price, but would not be able to compel airlines to use airport services at that price. If the airport is not satisfied with an arbitrated outcome, it has no choice — it must provide services at the arbitrated price. An airline that is not satisfied with an arbitrated outcome could change (even at the margin) parts of its operations, including its aircraft types and schedules. The imbalance in an airport-specific negotiate-arbitrate regime is a result of the mobility of airline capital and the immobility of airport capital.

Risks to commercial negotiation, airport investment and competition

Some inquiry participants stated that negotiate-arbitrate frameworks rarely lead to arbitration and instead, incentivise parties to reach commercially negotiated outcomes. A4ANZ drew heavily on the framework that applies to East Coast gas pipelines in developing its proposal, and noted there has been only one arbitration in the 20 months since those rules came into effect.

The implementation of an airport-specific arbitration regime that is binding on airport operators would change the incentives and behaviour of negotiating parties in ways that would be detrimental, rather than beneficial, to the community. Airport operators and airport users would negotiate ‘in the shadow’ of arbitration, with the outcomes of negotiations based on assumptions about the arbitrator’s potential decisions rather than the negotiating parties’ commercial incentives.

Providing airlines with access to arbitration without the checks and balances of the National Access Regime would distort airports’ incentives to make investments. Airport operators make long-lasting investments in common-use infrastructure (such as runways and terminals) and recover the costs of the investment from numerous airport users over decades. This creates two issues for arbitration.

First, airport investment can be risky and irreversible. An airport operator could be subject to arbitration at the discretion of airlines and, when considering new capital investment, would be obligated to consider the possible outcomes of future arbitrations. An arbitrator could re-evaluate the value of assets and the revenue that airports can earn from them. Airport operators would reduce the level of investment in airport infrastructure unless they are compensated for this extra risk through higher up-front charges or guaranteed future revenues.

Second, airports invest in common-user facilities to provide services to multiple users. Unrestricted access to arbitration would create opportunities for incumbent airlines to engage in anticompetitive conduct, such as using arbitration over a common-user facility to reduce the ability of other airlines to compete. For example, a full-service airline might use arbitration to seek a higher level of common-user service and then have this same service — with the resultant higher price — imposed on LCC competitors. The National Access Regime limits access to arbitration so that it is only available where it would increase competition.

An arbitration between an airport and one airport user about a common-user facility would have implications for other users of that facility. The arbitrator would have to take these effects into account, as well as the effects on passengers and the community. The greater the number of affected parties, the higher the risk that the arbitrator would make an error.

Effects on passengers and the community

Airlines and A4ANZ argued that an airport-specific negotiate-arbitrate framework would lead to lower airfares. The Commission considers that the link between arbitration and airfares is tenuous, and that passengers might be worse off compared with the current

light-handed approach. As noted above, a negotiate-arbitrate regime without the protection of the declaration process under the National Access Regime would likely distort airport investment decisions and could result in a reduction of competition between airlines. Both of these would be detrimental to passengers and the community. Contrary to the claim made by the airlines and A4ANZ, airfares could be higher if, for example, anticompetitive behaviour successfully delayed necessary airport investment, and this resulted in congestion.

There is no doubt that some commercial negotiations between airports and airlines have been challenging but, on balance, airports have not exercised their market power in their negotiations or conduct. An airport-specific negotiate-arbitrate framework that bypasses the protections offered by the National Access Regime would have perverse effects, leading to outcomes that would harm competition and the community. The benefits would need to be very large for the costs and risks of such a framework to be tolerable. They are not.

Access arrangements at Sydney Airport

Sydney Airport's regional ring fence, and the price cap and price notification regime, aim to support access for airlines operating flights between Sydney Airport and regional New South Wales (box 1). Sydney Airport is also subject to broader regulatory constraints, in particular, the movement cap, curfew and slot management scheme.

Box 1 Regional access arrangements at Sydney Airport

The Sydney Airport Slot Management Scheme sets out guidelines for the allocation of aircraft movement slots at Sydney Airport. The regional ring fence is a feature of the scheme that reserves a number of slots for airlines operating flights to or from regional New South Wales. Airlines can only operate regional services in legislated peak periods (weekdays from 6 am to 11 am, and 3 pm to 8 pm) using the ring-fenced slots.

Under the regional price cap and price notification regime, prices for aeronautical services and facilities are capped for airlines operating flights between regional NSW destinations and Sydney Airport. Sydney Airport must notify the ACCC before it can increase prices for these services. Price-capped regional charges are currently about half of Sydney Airport's scheduled domestic aeronautical charges.

The regional ring fence, and the price cap and price notification regime

The current regional access arrangements facilitate access for airlines operating regional flights into Sydney Airport, but there is scope for improvement. Allowing airlines to use any peak-period slot for regional air transport services would enable airlines to more easily trial regional services in peak periods, more flexibly respond to changes in market demand on different routes, and use their aircraft more efficiently. Increased competition on existing routes and new regional air transport services resulting from this reform would also benefit

passengers and regional communities. Airlines that use non-regional slots for regional air transport under the Commission's proposed reform should pay domestic aeronautical charges or negotiate charges with Sydney Airport. This would prevent the price cap and notification regime, and any associated costs, from expanding due to a change in the use of slots.

The ACCC may request information such as financial models and cost allocation methodologies when conducting a price notification assessment. Some of this material can be treated on a confidential basis, but Sydney Airport's proposed prices and other terms are made public. The public nature of price notifications can discourage commercially negotiated outcomes because airlines may not wish for their competitors to learn sensitive information. Encouraging commercial negotiations between Sydney Airport and airlines operating regional services could lead to better outcomes, including mutually agreed improvements in aeronautical services and facilities used by those airlines. Commercial negotiations would be facilitated by updating the price cap and notification regime such that it applies only to regional aeronautical services that are not covered in commercial agreements.

The regional ring fence, and the price cap and price notification regime, are among a range of factors that affect airlines' decisions to service a regional route. The opening of Western Sydney Airport in 2026 may also affect these decisions in the longer term. The Commission's next inquiry into airport regulation should consider the continued need for regional access arrangements at Sydney Airport in light of the development of Western Sydney Airport and any other future considerations. This analysis would be supported by implementation of the Commission's recommendation to expand the monitoring regime to include data for Sydney Airport on costs and revenues in relation to the provision of aeronautical services for air transport to regional New South Wales. This proposal would allow the Commission and others to more easily evaluate the costs of the regional access arrangements against their benefits.

Broader regulatory constraints at Sydney Airport

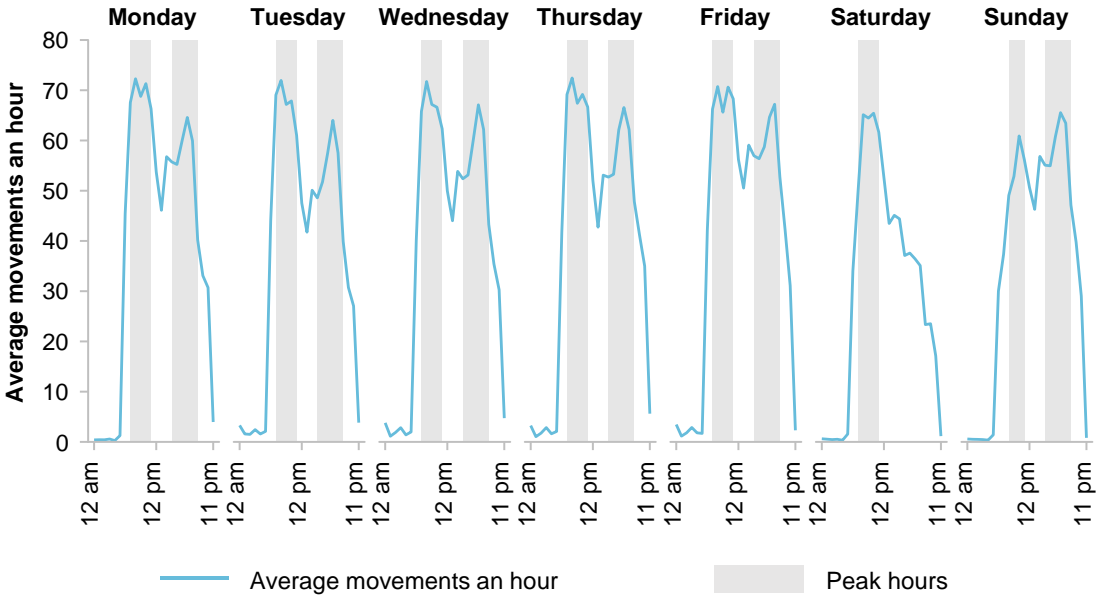
The Australian Government implemented a regulatory movement cap and curfew at Sydney Airport to manage the effects of aircraft noise on residents. The movement cap restricts the capacity of Sydney Airport to 80 movements an hour (in non-curfew periods). In general, the average number of actual movements exceeds 70 an hour only a few times a week during morning peak periods (figure 10). The curfew limits aircraft movements between 11 pm and 6 am, with only a small number of flights permitted, including pre-approved freight aircraft.

Sydney Airport's movement cap and curfew are important for managing the effects of aircraft noise and maintaining Sydney's liveability. Airservices Australia (ASA) estimated that about 96 000 Sydney residents lived within an Australian Noise Exposure Index contour in 2017 (figure 11). Residents underneath a flight path in Sydney in 2018 experienced, on average, one disruptive noise event every 14 minutes, or about 70 noise events across the airport's non-curfew period each day. Residents emphasised the importance of the curfew for an unbroken night's sleep and that disruptive noise events can have negative effects on

health, including mental and social wellbeing. There was strong resistance from the residents of Sydney to any change that would relax the regulatory constraints.

The movement cap has unintended consequences. For example, it can exacerbate delays when there are disruptions, such as those due to weather events. Delays can lead to significant costs for airlines and passengers that cascade across Australia’s aviation network, due to the high number of aircraft that pass through Sydney Airport. However, the extent to which the movement cap is responsible for compounding delays is complicated by other factors. Airline crew displacement, airline cancellation decisions, and physical and operational constraints at Sydney Airport, can also prolong the time taken to recover from disruptive events.

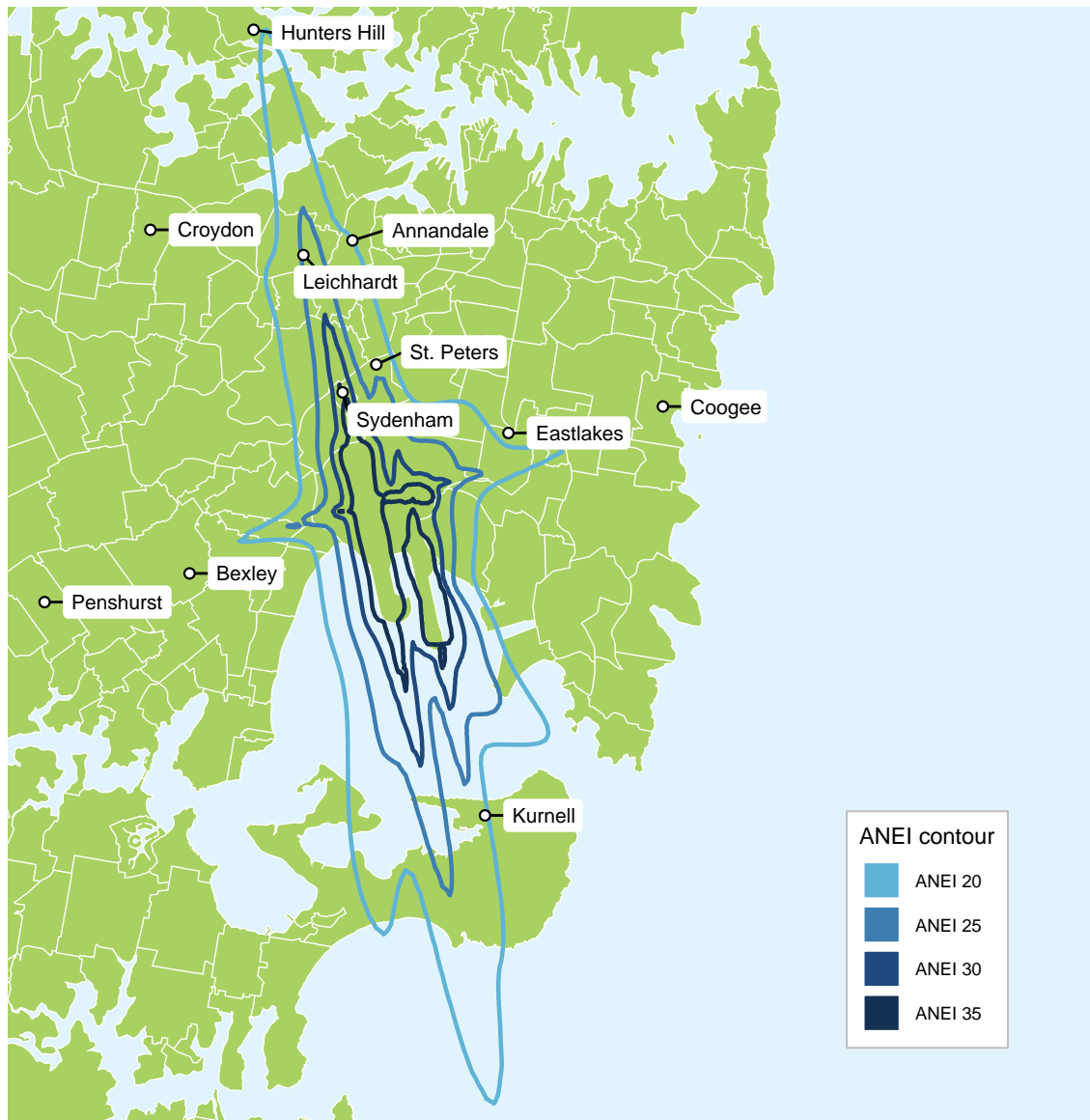
Figure 10 Average hourly movements at Sydney Airport by day of the week
2018



Sydney Airport and airlines supported changes to the movement cap that address some of its unintended consequences. There is a case for reform to the measurement of the movement cap — this can be done without changing the limit on the actual number of movements and would make it more likely that the intended 80 actual movements an hour could be achieved. The movement cap is currently measured on a 15-minute rolling hour basis — there are effectively four ‘regulated hours’ within any non-curfew 60-minute period. A reform that requires ASA to measure the cap on actual movements only once (rather than four times) an hour would allow ASA to process movements more smoothly and less conservatively, and reduce its compliance costs. This reform would also reduce any necessary delays to departing aircraft that are caused by the movement cap, benefiting airlines and their passengers. The

cap would ensure that the number of actual movements within a 60-minute period starting on the hour does not exceed 80.

Figure 11 **Australian Noise Exposure Index (ANEI) contours around Sydney Airport**
2018



There would also be benefits from allowing alternative types of freight aircraft to operate during the curfew hours of 11 pm to 6 am. The Sydney Airport Curfew Act 1995 (Cwlth) permits the use of one type of jet aircraft (the British Aerospace 146 (BAe-146)) for freight operations during this time. Introducing noise standards for freight aircraft would allow alternative types of freight aircraft that are no louder (but are potentially larger) than the BAe-146 to move through Sydney Airport at night. This would benefit consumers, freight

service providers, the airport and the community more broadly. The Commission proposes that the current cap on the number of freight aircraft movements be retained, so local residents would not be affected by an increase in the number of actual movements or noise events.

Historical precedence provisions in Sydney Airport's slot management scheme mean that airlines are entitled to their slots from a previous scheduling season, provided they meet certain criteria. These provisions can provide certainty to existing airlines and their customers, but also prevent new entrants from gaining access to an airport and could be exploited by incumbents to limit competition between airlines. The Australian Government should commission a public review of Sydney Airport's slot management scheme to assess possible reforms to the current arrangements. The proposed review should seek to achieve a system that delivers better outcomes for passengers, and the broader community, by enabling a wider variety of routes or lower airfares. Investigating the need to implement or revise slot management at other major Australian airports would also be beneficial.

Competition in markets to supply jet fuel

Jet fuel accounted for the largest single source of airline operating costs, at about 20 per cent in 2017-18 (although this share varies by airline). In the same year, the demand for jet fuel in Australia was 9000 megalitres, which cost airlines between \$7–9 billion. This means a one cent per litre decrease in the jet fuel price could result in a \$90 million reduction in operating costs for airlines refuelling in Australia.

Infrastructure to supply jet fuel

Markets to supply jet fuel comprise a complex chain of infrastructure services to transport jet fuel from its origin as refined crude oil in international or domestic refineries to the wingtip at Australian airports. The supply chain includes both off- and on-airport infrastructure, including joint user hydrant installation (JUHI) infrastructure and pipelines. JUHI infrastructure owners lease land from airport operators for a period of up to 20 years. In addition to lease fees, some airports charge fuel suppliers fuel throughput levies, which can be justified if they are agreed to during lease negotiations as part of an efficient pricing regime.

The jet fuel supply chain is dominated by four large vertically integrated suppliers — BP, Caltex, Mobil and Viva — that are involved in each part of the supply chain, often in a joint venture arrangement between two or more of these suppliers. Vertical integration and horizontal coordination generate benefits by capturing economies of scale and scope, and by lowering coordination costs where related services, such as the piping, storage and distribution of fuel, would otherwise be provided separately.

The structure of markets to supply jet fuel can result in a more efficient provision of infrastructure services, but these benefits are tempered by potential losses in competition.

- Vertical integration of suppliers and the concentrated ownership of infrastructure alone provide some scope and incentive for providers to charge prices above the efficient level.
- High barriers to accessing infrastructure at multiple points in the supply chain have made it difficult for new jet fuel suppliers to establish a supply chain at some airports.
- Most of the fuel supplied from import terminals to the monitored airports is transported through pipelines owned by existing suppliers. New suppliers could truck fuel to the airport, but there are congestion and environmental cost disadvantages associated with trucking large volumes of fuel. Trucking is also unlikely to be a viable substitute to pipelines for supplying fuel to the monitored airports over the long term.

There is cause for concern with the level of competition

Markets to supply jet fuel are characterised by a small number of vertically integrated suppliers and high barriers to entry, and this has likely led to higher prices to access infrastructure services and higher fuel prices. Greater third party access to infrastructure services would increase competition and put downward pressure on prices to access those services, as well as on fuel prices.

The conditions for competition are improving with some airports, such as Melbourne and Darwin, introducing lease arrangements for the JUHI infrastructure that incorporate open access arrangements for third party fuel suppliers. In addition, Perth, Sydney and Adelaide airports are currently renegotiating their JUHI leases (and the joint operated storage facility lease in Adelaide) and have indicated that open access will be an important feature of any new agreement. Including open access in lease agreements is a positive development in markets to supply jet fuel as it could allow third parties to gain access to the supply chain and increase competition. In addition, the National Access Regime acts as backstop regulation to provide third party access to infrastructure services to supply jet fuel.

Ensuring the JUHI at Western Sydney Airport operates on an open access basis, including after any future privatisation, would avoid competition problems associated with limited access JUHI infrastructure when the airport commences operation.

The Australian Government should stipulate in the terms of reference for the next airports inquiry that the Productivity Commission assess the state of competition in markets to supply jet fuel, and review progress toward open access at JUHIs.

The jet fuel supply chain is critical for aviation operations and requires sufficient capacity to minimise fuel disruptions. Infrastructure owners need certainty, including through long-term leases with airport operators, to make investments in jet fuel infrastructure. Long-term investment should be supported by good planning and consultation between fuel companies, airport operators, airlines, and the Australian, State and Territory Governments.

A jet fuel infrastructure planning group should be established at each of the monitored airports as part of the master planning process. The group’s remit could include, among other things: capacity constraints and any foreseeable pressure points; linkages between different parts of the infrastructure supply chain; demand forecasts and actions to ensure security of supply; and future infrastructure requirements and investment planning.

Infrastructure at regional airports

Regional airports — the majority of which are owned and operated by local councils — provide important services for communities, but are prone to poor decision making and governance. For example, airlines and their representatives questioned the financial asset management practices at some council-operated airports. Concerns raised included arbitrary revaluations of airport assets and the treatment of government-funded assets in financial reporting that leads to increases in aeronautical charges.

Capability at council-operated regional airports would be improved by providing operators with tools that enable them to better manage airport assets. The WA Department of Transport recognised this need and has developed the Strategic Airport Assets and Financial Management Framework (the WA Framework). The aim of the WA Framework is to provide a transparent approach for managing airport assets and improve airport operators’:

- engagement with stakeholders
- understanding and financial management of the asset base
- determination of future demand for air transport services and the appropriate charges to maintain and replace airport assets.

Broader adoption of the WA Framework would help build the capability of local councils in other jurisdictions. The Australian Government should review the efficacy of the WA Framework in 2022, in consultation with State, Territory and Local Governments. Pending the findings of that review, the WA Framework should be adapted and rolled out by governments in other jurisdictions with the objective of providing a template for sound asset management practices and greater transparency when determining airport charges at regional airports.

The criteria used by the Australian, State and Territory Governments to assess the merit of financial support for many infrastructure projects at regional airports can lack rigour and lead to unwarranted investments. Further, a council’s regional development objectives can be in conflict with the efficient provision and operation of airport services. Participants gave the example of Kangaroo Island Airport, stating that infrastructure was upgraded — with Australian and State Government funded support — to cater for more passengers and larger aircraft based on overly optimistic assumptions of future passenger numbers and aircraft requirements. Unjustified infrastructure upgrades funded by the Australian, State and Territory governments could lead to the perverse outcome of a loss of air services to communities if they result in increased aeronautical charges that airlines and passengers are not willing to pay.

Australian, State and Territory Governments should adopt transparent and independent public assessment processes for the funding of airport infrastructure to improve decision making and investment outcomes that include:

- an assessment of the merit of and airport users' willingness to pay for proposed infrastructure
- demonstration of the application of sound asset management practices by the airport operator seeking government support for infrastructure investments.

Improving these processes would help ensure that infrastructure at regional airports remains fit for purpose and meets the needs of airlines and communities.

Recommendations and findings

Airports with market power

FINDING 5.1 AIRPORTS ARE NOT SYSTEMATICALLY EXERCISING THEIR MARKET POWER

Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) have significant market power in aeronautical services, but they have not systematically exercised their market power to the detriment of the community. There is no justification for significant change to the current form of regulation of aeronautical services at any of these airports at this time.

Relatively high international charges at Sydney and Brisbane airports give reason to remain vigilant. More specific data on costs and revenues for international and domestic aeronautical services provided at the monitored airports would allow greater scrutiny of airport performance (Recommendation 9.4).

Access arrangements at Sydney Airport

RECOMMENDATION 7.1 USING ANY PEAK-PERIOD SLOT FOR REGIONAL FLIGHTS

The Australian Government should amend the Sydney Airport Slot Management Scheme 2013 (Cwlth) to allow peak-period slots that are not part of a permanent regional service series (PRSS) to be used for flights servicing regional New South Wales. These slots should not become PRSS slots when used for regional flights.

Future declarations relating to the regional price cap and notification regime should only apply to regional flights operated through PRSS slots after the current declaration ceases on 30 June 2019.

RECOMMENDATION 7.2 COMMERCIAL NEGOTIATIONS FOR NSW REGIONAL SERVICES

The Australian Government should ensure that future declarations relating to the regional price cap and notification regime at Sydney Airport only apply to aeronautical services that are not covered in commercial agreements between Sydney Airport and airlines operating flights servicing regional New South Wales, after the current declaration ceases on 30 June 2019. Future declarations should specify that prices in commercial agreements cannot be used to assess whether Sydney Airport has breached section 95Z of the *Competition and Consumer Act 2010* (Cwlth).

The Australian Government should consult with stakeholders about the drafting of any legislative instruments relating to this reform.

RECOMMENDATION 7.3 MEASURING SYDNEY AIRPORT'S MOVEMENT CAP ONCE AN HOUR

The Australian Government should amend section 6(2) of the *Sydney Airport Demand Management Act 1997* (Cwlth) to define a regulated hour as a period of 60 minutes starting on the hour.

RECOMMENDATION 7.4 ALTERNATIVE TYPES OF FREIGHT AIRCRAFT DURING THE CURFEW

The Australian Government should amend the *Sydney Airport Curfew Act 1995* (Cwlth) to introduce noise standards for freight aircraft allowed during the curfew, rather than specifying only one type of freight aircraft (the British Aerospace 146). The noise standards should allow alternative types of freight aircraft to operate during the curfew, provided they do not increase aircraft noise above current levels, or the number of freight aircraft movements above the current cap (74 a week).

The new freight aircraft noise standards should be in place by the end of 2020.

RECOMMENDATION 7.5 REVIEWING SLOT MANAGEMENT AT AUSTRALIAN AIRPORTS

The Australian Government should commission a public review of the Sydney Airport Slot Management Scheme 2013 (Cwlth) following the completion of the International Air Transport Association's review into the Worldwide Slot Guidelines (WSG), expected at the end of 2019.

The public review should assess how effectively the Scheme contributes to the efficient use of airport infrastructure, taking into account regional access and noise management objectives. The review should consider reform options in relation to:

- whether slot allocation arrangements generate the greatest net benefits to the community or if alternatives that are not based on historical precedence would improve outcomes for passengers
- the outcomes of the WSG review and any WSG provisions that are not currently part of the Scheme
- the costs and benefits of continued alignment with the latest WSG, including the effects on competition between airlines.

The review should also investigate the need to implement or revise slot management at other major Australian airports.

Competition in markets for jet fuel

FINDING 8.1 PRICES ARE LIKELY HIGH BUT THERE IS NO ROLE FOR NEW ACCESS REGULATION

The structure of markets to supply jet fuel at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) gives cause for concern about the level of competition. The markets are characterised by vertically integrated suppliers and high barriers to entry and this has likely led to higher prices to access infrastructure services and higher fuel prices.

Any change to the regulatory environment at this time is likely to result in a net cost to the community. The risks associated with industry-specific access regulation could be considerable, given the potential effect on infrastructure investment incentives. The National Access Regime under Part IIIA of the *Competition and Consumer Act 2010* (Cwlth) remains an effective tool for providing access to significant infrastructure.

Some airports and fuel suppliers have acted to improve competition at the joint user hydrant installation (JUHI), through introducing open access in JUHI lease agreements. This removes a hurdle to accessing the JUHI infrastructure but does not improve access to upstream infrastructure.

RECOMMENDATION 8.1 JET FUEL INFRASTRUCTURE AT WESTERN SYDNEY AIRPORT

Through the Shareholder Ministers of the Western Sydney Airport Corporation (the Minister for Finance and the Minister for Urban Infrastructure), the Australian Government should recommend to the Western Sydney Airport Corporation Board that the on-airport jet fuel infrastructure operate on an open access basis and that this should be a condition of any future privatisation.

RECOMMENDATION 8.2 INTRODUCING JET FUEL INFRASTRUCTURE PLANNING GROUPS

The Minister for Infrastructure should recommend a jet fuel infrastructure planning group be incorporated into the master planning process at each monitored airport. The group should be sufficiently flexible to suit the arrangements at each airport, but could be tasked with discussing, among other things:

- capacity constraints and any foreseeable pressure points
- linkages between different parts of the infrastructure supply chain
- demand forecasts and actions to ensure security of supply
- future infrastructure requirements and investment planning.

Improving airport regulation

FINDING 9.1 AN AIRPORT-SPECIFIC NEGOTIATE-ARBITRATE REGIME WOULD BE DETRIMENTAL

An airport-specific negotiate-arbitrate regime that bypasses the checks and balances of the National Access Regime would:

- undermine the incentives for genuine commercial negotiation between airport operators and airport users
- increase the risks that airports would face in making investments and distort their incentives to make investments
- create opportunities for incumbent airlines to engage in anticompetitive conduct.

Such a regime would be detrimental to the community as a whole.

RECOMMENDATION 9.1 REMOVING ANTICOMPETITIVE CLAUSES FROM AGREEMENTS

The Australian Government should amend the *Aeronautical Pricing Principles* to specify that any agreement between an airport and an airport user must not contain anticompetitive clauses. This includes clauses that would constrain a user's access to regulatory remedies for the exercise of market power and clauses that directly or indirectly reference the terms offered to users' competitive rivals.

RECOMMENDATION 9.2 **FUTURE PRODUCTIVITY COMMISSION REVIEWS**

The Australian Government should continue the practice of five yearly Productivity Commission inquiries into the economic regulation of airports, to determine the effectiveness of the regulatory regime in achieving the following objectives:

- promoting the economically efficient operation of, and timely investment in, airports and related industries
- minimising unnecessary compliance costs
- facilitating commercially negotiated outcomes in airport operations.

In requesting the next inquiry, the Australian Government should also ask the Commission to consider:

- whether any airports should be added to, or removed from, the price and quality of service monitoring regime
- if there is a continued need for arrangements to facilitate access for airlines servicing regional New South Wales
- the state of competition in markets to supply jet fuel, including progress toward open access joint user hydrant installation infrastructure lease agreements.

The Australian Government should stipulate in the inquiry terms of reference that the monitored airports make their agreements with airport users available to the Commission on request, on a commercial-in-confidence basis.

RECOMMENDATION 9.3 **DISCONTINUE SECOND-TIER AIRPORT MONITORING**

The Australian Government should issue a statement that the voluntary self-reporting system for second-tier airports is discontinued.

RECOMMENDATION 9.4 MORE DETAILED INFORMATION ON AIRPORT PERFORMANCE

The Australian Government should amend Part 7 of the Airports Regulations 1997 (Cwlth) such that, in addition to current requirements, monitored airports are required to provide to the Australian Competition and Consumer Commission (ACCC), for each financial year, statements that:

- show the number of passengers that depart from and arrive at each terminal
- separately show the costs and revenues in relation to the provision and use of aeronautical services for domestic flights and for international flights
- for Sydney Airport, show the costs and revenues in relation to the provision and use of aeronautical services for flights servicing regional New South Wales
- separately show the number of users, costs and revenues in relation to the provision and use of at-terminal and at-distance car parking, and the utilisation rates for each type of parking
- separately show the number of vehicles using different landside services, and the charges (and other terms of access), operating revenues and costs attributed to the provision of each landside service
- report any costs that are allocated to the provision of specific services, including: international and domestic aeronautical services; at-terminal and at-distance parking; and landside access services
- report the methodologies that they use to allocate costs to specific services.

The Australian Government should direct the ACCC to:

- publish annual monitoring reports
- publish the methodologies the monitored airports use to allocate costs across different services
- publish a database of the information the airports provide
- consult with airports and airlines to determine whether any of the information they provide is commercially sensitive and to develop approaches to reporting that balance disclosure with the need to protect sensitive information.

The Australian Government should implement these changes in time for the 2020-21 monitoring report.

RECOMMENDATION 9.5 IMPROVING QUALITY OF SERVICE MONITORING

The Australian Competition and Consumer Commission (ACCC) should, within 12 months, provide advice to the Australian Government on an updated set of quality of service indicators, in consultation with airports, airlines, other airport users and the Department of Infrastructure, Transport, Cities and Regional Development.

Once the ACCC has developed its recommended set, the Australian Government should amend schedule 2 of the Airports Regulations 1997 (Cwlth) to codify the updated set of indicators.

Regional airports

RECOMMENDATION 10.1 **ASSET MANAGEMENT AT REGIONAL AIRPORTS**

The Australian Government should review the efficacy of the Western Australian Strategic Airport Assets and Financial Management Framework in 2022, three years after its implementation in Western Australia. The review should be conducted in consultation with State, Territory and Local Governments.

Pending the findings of that review, the Western Australian Strategic Airport Assets and Financial Management Framework should be adapted and rolled out by governments in other jurisdictions with the objective of providing a template for sound asset management practices and greater transparency when determining airport charges at regional airports.

RECOMMENDATION 10.2 **FUNDING FOR REGIONAL AIRPORT INFRASTRUCTURE**

The Australian, State and Territory Governments should:

- ensure that an independent analysis of proposed government funding of regional airport infrastructure is completed before funding is committed. The analysis should include a public consultation process and assess:
 - the economic and financial viability of proposed infrastructure investment, including the ongoing operational costs
 - whether the project is consistent with the long-term strategy of the region and the airport's master plan
 - the social and economic benefits and the recipients of those benefits
 - users' (airlines and communities) willingness to pay for the infrastructure
 - whether the airport operator has in place sound asset management practices
- assess proposed government-funded investments in airport infrastructure using the relevant functional economic region as the basis for decisions, not individual local councils
- monitor and independently evaluate any project that receives funding to assess whether the project outcomes have been achieved. The evaluation report should be published.

The Australian, State and Territory Governments should publish the justification for funding any infrastructure projects that were not supported by independent analysis.

1 Introduction

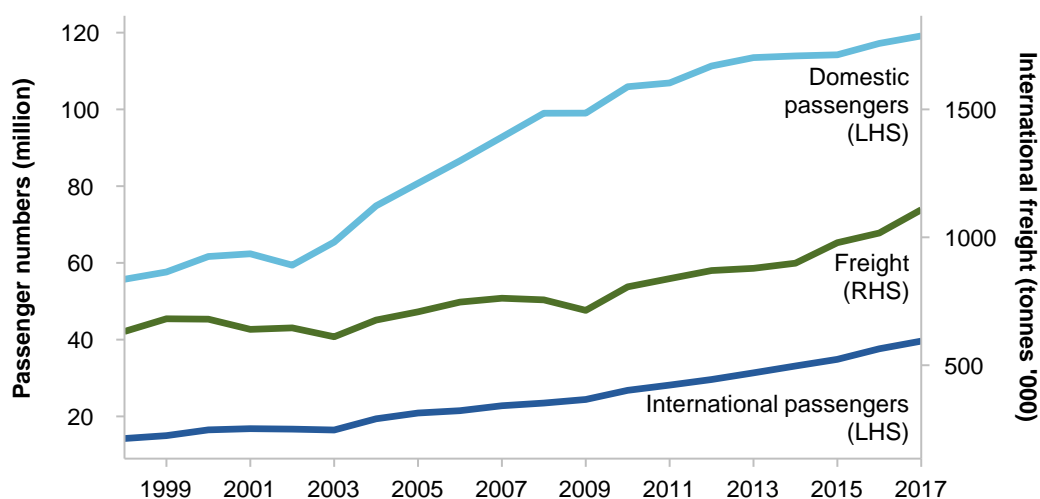
1.1 Airports are operating in a changing environment

Air transport connects people separated by long distances, supports economic activities, including tourism and the resource sector, and facilitates employment and economic growth. It also supports social connectivity, which enables people to spend time with friends and family, and provides regional and remote communities with access to essential services, such as healthcare and emergency relief.

Australia's domestic air transport market is the seventh largest in the world (measured by the number of one-way seats). It has the highest capacity of domestic seats per capita, which reflects the country's high standard of living and unique geography (AAA, sub. 50).

The number of passengers travelling through Australia's airports has more than doubled over the past 20 years, to about 160 million in 2017. The volume of international air freight has increased by about 75 per cent over the same period (figure 1.1).

Figure 1.1 Passenger and international freight movements^{a,b}



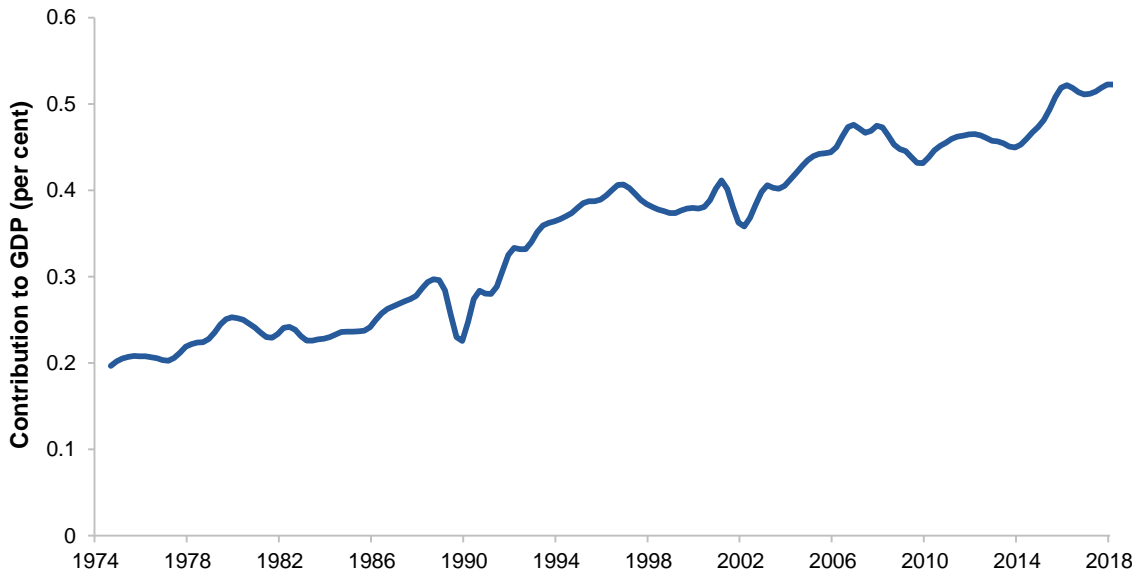
^a International freight includes dedicated freight aircraft and freight carried in the body of passenger aircraft.

^b Data for domestic freight are incomplete and not available in the source dataset.

Source: BITRE (2018).

Air transport contributed \$9.4 billion to GDP in 2017-18, or roughly 0.5 per cent of Australia's total GDP. This contribution has grown over time, more than doubling over the past two decades (figure 1.2).

Figure 1.2 The air transport industry's growing contribution to GDP^a



^a The ABS output indicator for air and space transport is only inclusive of data for air transport.

Source: Productivity Commission estimates based on ABS (*Australian National Accounts: National Income, Expenditure and Product, Dec 2018*, Cat. no. 5206.0).

Airports must adapt to changing passenger and airline needs

Airports have developed significantly since Australia's oldest commercial airport — at Mascot in Sydney — was declared an airport in 1920. Increasing passenger demand for air transport has led to increasing demand by airlines for airport services. Changes in the volume and mix of passengers affect the level and type of investments made by airport operators. Airport operators have also diversified the services they offer with some now offering services in markets only indirectly related to air travel. Services, such as business parks and shopping centres, are typically provided to general retail and business customers, rather than airlines and passengers.

Strong international passenger growth and the rise of low-cost carriers

Most people who use Australian airports travel domestically, but growth in the number of international passengers has outpaced domestic passenger growth every year since 2009. This growth is expected to continue. Tourism Research Australia, for example, forecast that the number of international passengers will grow by about 75 per cent over the decade to

2027 (TRA 2018a). International leisure visitors (on holidays or to visit friends and relatives), in particular, are growing in number and as a proportion of total visitors. About three quarters of international visitors come to Australia for leisure, with this forecast to grow to over 80 per cent by 2027.

Some airports are seeking to take advantage of this increase in international visitors. For example, regional airports, such as Hobart and Newcastle, are investigating options for introducing or increasing international services (Australian Government and Tasmanian Government 2019; McKinney 2018). However, airports that are serving an increasing number of international passengers must provide terminal space for security, biosecurity and border processing services, which are typically more costly to provide than equivalent services for domestic passengers.

Airports have also responded to an increase in the proportion of flights operated by low-cost carriers (LCCs), which prefer lower priced no-frills services compared with full service airlines. For example, LCCs typically seek faster aircraft turnaround times to reduce their aircraft parking fees and may not require an aerobridge or premium terminal facilities for passengers. Some airports, such as Melbourne and Avalon, have built dedicated terminals to meet the needs of LCCs. Avalon Airport's international terminal is designed exclusively for LCCs — it has no aerobridges and check-in facilities are shared by airlines offering domestic and international services.

Technology is driving changes in passenger and airline needs

There have been considerable developments in aircraft technology since Harry Houdini's first controlled, powered flight at Diggers Rest in 1910. These changes in aircraft technology have required changes to airports' infrastructure. Airport operators upgraded taxiways, aerobridges and added apron and gate space to accommodate the Airbus A380 in the mid-2000s. Sydney Airport, for example, planned new major international terminal infrastructure based on an expectation that Qantas would expand its fleet of A380 aircraft (sub. 53). Ten years on, airlines are gradually switching from A380s to smaller and more fuel-efficient aircraft that operate more frequently, and require airport services and infrastructure that can support an efficient turnaround on the ground.

Technology is also changing how airport operators provide services and how passengers can respond to poor-quality service at airports. Passengers can be dropped off and picked up by a rideshare service or compare car parking prices online. They can reduce the time they spend in airport queues by checking in through a mobile app. Passengers can report quality of service issues using software that an airport operator can monitor in real-time (Brisbane Airport, sub. 38). They can also express their views on airport and airline services with more immediacy than in the past by using social media or online forums. Boscutti provided the Commission with examples of passengers' feedback posted online, covering service quality at Sydney, Melbourne, Brisbane and Perth airports, including reviews of facilities, queuing times, staffing and airport design (sub. DR163).

1.2 The Commission's task

The purpose of this inquiry is to determine the effectiveness of the economic regulation of services provided by airports to passengers, airlines, and commercial operators that require landside access to the terminal precinct. The Australian Government has asked the Commission to assess the current regime against the following objectives:

- promoting the economically efficient operation of, and investment in, airports and related industries
- minimising compliance costs
- facilitating commercially negotiated outcomes between airport operators and users.

The terms of reference specify the consideration of aeronautical services at the main passenger airports operating in Australia's major cities. The Commission has focused on domestic and international aeronautical services at the four airports monitored by the Australian Competition and Consumer Commission (ACCC) — Sydney, Melbourne, Brisbane and Perth — and airports in the second tier of monitoring, such as Adelaide, Canberra and Gold Coast.

The Commission examined the provision of on-airport car parking and access to the terminal precinct for landside operators at the monitored airports, including taxis and shuttle buses transferring passengers from off-airport car parks.

The Australian Government asked the Commission to examine two specific issues: whether the arrangements for airlines offering regional services in New South Wales to access Sydney Airport have unintended consequences; and competition in markets to supply jet fuel in Australia, including at the major airports.

The terms of reference further request that, following on from its 2011 findings, the Commission should consider:

- the effectiveness of the monitoring regime conducted by the ACCC, including the methodology used and the adequacy of the information collected
- whether the current regime affects the ability of airports to price, operate and invest in airport infrastructure in an efficient and timely manner
- whether the existing regime is effective in appropriately deterring potential abuses of market power by airport operators
- whether existing arrangements for the planning and operation of land transport linkages to airports are effective.

The terms of reference do not preclude the Commission from considering other airports or matters of policy concern, including matters raised by participants. The Commission also considered aeronautical services at regional airports and regulatory constraints at Sydney Airport (the movement cap, curfew and slot management scheme).

1.3 The Commission's approach

Although this is the Commission's fourth investigation of the economic regulation of airports since 2000, this inquiry presents an opportunity for a fresh look at whether existing regulatory arrangements are fit for purpose.

The Commission has developed an analytical framework (chapter 2) for assessing the economic regulation of airports. The framework sets out the Commission's approach to:

- determining the rationale for government intervention, including to address efficiency or equity objectives
- assessing whether the regulatory regime is fit for purpose, including whether it achieves its intended objectives or increases community benefits compared with alternatives
- implementing policy change, including consideration of institutional arrangements, transition paths and monitoring and review processes.

The inquiry process

The Commission received the terms of reference for this 12-month inquiry on 22 June 2018, and released an issues paper on 9 July 2018. The issues paper outlined the scope of the inquiry, areas where the Commission sought information, and invited submissions from interested parties. The Commission undertook consultation and public hearings with stakeholders following the release of the issues paper (box 1.1). It also held targeted public hearings on competition in markets for jet fuel prior to the release of the draft report.

The Commission released its draft report on 6 February 2019 to subject its approach and draft recommendations to public scrutiny, and seek additional information through consultation, public hearings and submissions from interested parties. The draft report, and subsequent consultations and submissions, were critical opportunities for the Commission to receive feedback on its preliminary conclusions and shape its recommendations presented in this final report.

The Commission used quantitative techniques to conduct its assessment where possible. The ACCC monitoring reports were a key input into this analysis and the Commission supplemented this with other quantitative sources, including data from the Air Transport Research Society, the Bureau of Infrastructure, Transport and Regional Economics, Skytrax, and data provided by inquiry participants. The Commission informed its analysis using academic literature on aviation markets, and drew on publicly available data such as company financial reports and charges displayed on airport and airport users' websites. The Commission has made explicit any limitations associated with a particular indicator used in its analysis. It took particular caution when comparing data across jurisdictions and when assessing airport performance in the context of different regulatory regimes.

Box 1.1 **Consultation throughout the inquiry**

The Commission consulted with representatives from the monitored airports, other capital city and regional airports, airlines, airport and airline peak bodies, fuel suppliers, financial groups, researchers, and Australian, State and Territory government agencies.

As with many of the Commission's inquiries, participants have divergent views, including on the effectiveness of current government policies and what constitutes a fit-for-purpose regulatory regime. Participants in this inquiry also made a number of claims and counter claims. The Commission sought to assess the veracity of these claims and requested substantiating evidence from participants, including, where possible, primary source data.

The findings and recommendations of this inquiry are not intended to single out the interests of any group of stakeholders, but to serve the interests of the community as a whole, as the Commission is required to do under its Act. The Commission greatly appreciates the contribution of participants in this inquiry and the substantial volume of evidence provided.

Submissions

The Commission received a total of 185 submissions to this inquiry, with 88 of these submissions provided prior to the release of the draft report and 97 provided in response to the draft report. Submissions are available on the Commission's website and listed in appendix A.

The Commission received a large number of confidential or heavily redacted submissions — some with no clear justification for why the material was commercially sensitive. This is regrettable because it limited the public scrutiny of evidence made in these submissions. The Commission was able to verify some statements made in confidential submissions by requesting further information or access to confidential documents.

Public hearings

The Commission held public hearings in November 2018 on competition in markets for jet fuel. The Commission conducted public hearings on the draft report in Melbourne, Sydney and Canberra in late March 2019. In total, 32 participants appeared, with representation from government, industry, academia and the general public. The full transcript of all public hearings is available on the Commission's website.

Appendix A includes a complete list of consultations, submissions and hearing participants.

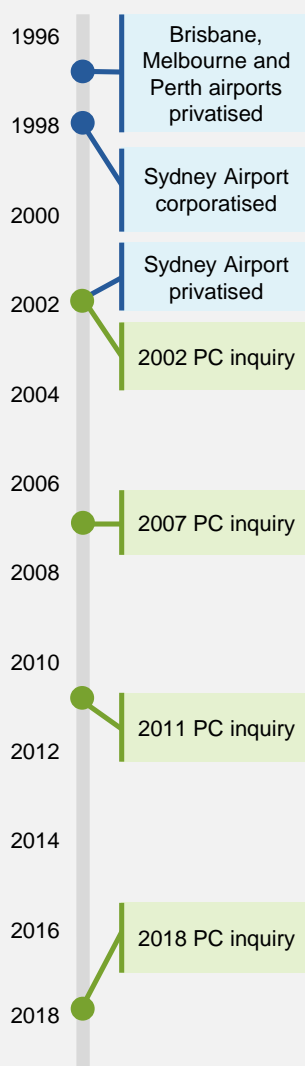
The Commission has also drawn on material and analysis of a qualitative nature and incorporated participant views in both the draft and final reports. However, as with most inquiries, it was not feasible to directly respond to every point raised by participants given the range of views and large volume of evidence provided. All material provided by participants, even if not referenced directly, provided important information and helped to shape the Commission's analysis.

1.4 The current approach to economic regulation of airports

The economic regulation of airports has evolved as the ownership and management of Australian airports has changed over time (box 1.2). Airport privatisation in the late 1990s was the catalyst for a review of airport regulation and the current regulatory approach.

Box 1.2 A brief history of airport regulation in Australia

In the early twentieth century, the Civil Aviation Branch of the Department of Defence was responsible for licensing aerodromes, as well as an extensive program of construction and development. By 1927, there were 45 Commonwealth aerodromes, 12 privately licensed aerodromes, two private fields and 91 emergency landing grounds around the country (Australian Heritage Council 2003).



The Australian Government established the Federal Airports Corporation (FAC) in 1988 in a move to improve the commercial operation of 22 Australian Government-owned airports. The FAC determined and published runway tariffs for these airports based on the aircraft's maximum take-off weight.

Privatisation of Australia's airports

In April 1994, the Australian Government announced the privatisation by long-term lease of the airports operated by the FAC. The rationale for privatisation was to 'improve the efficiency of airport investment and operation in the interests of users and the general community, and to facilitate innovative management' (Harris, cited in PC 2002, p. 45).

In 1997, the FAC began the sale of 50-year leases for 17 of its 22 airports to privately owned operators. The FAC completed sales in two phases beginning with Melbourne, Brisbane and Perth in 1997, followed by 14 smaller airports in 1998. The remaining five airports (Sydney, Bankstown, Hoxton Park, Camden and Essendon) were leased to two government-owned corporations in 1998. In 2001, Essendon Airport was leased to private owners, and in 2002, privatisation was completed with the sale of the other Sydney basin airport leases.

The federally-leased airports were subject to price regulation during the initial period of private ownership. Airports that had significant regular public transport movements — Sydney, Melbourne, Brisbane, Perth, Adelaide, Gold Coast, Hobart, Launceston, Alice Springs, Canberra, Darwin and Townsville — were designated as 'core regulated airports'. Price regulation of these 12 airports included price notification, price monitoring, price cap arrangements and special provisions for necessary new investment.

(continued next page)

Box 1.2 (continued)

Productivity Commission inquiries into airport regulation

In December 2000, the Australian Government asked the Productivity Commission to conduct an inquiry into the price regulation of airports, including an examination of the price cap regime. The Commission found that price caps distorted production and investment decisions due to the inability of regulators to set prices accurately (PC 2002). The Australian Government implemented the Commission's recommendation that the economic regulation of airports move to a light-handed approach with price monitoring.

In 2006, the Australian Government requested that the Commission conduct a second inquiry into the regulation of airports. That inquiry found that price monitoring had been successful and recommended its continuation, albeit with a different scope. The Commission recommended Darwin and Canberra airports be removed from the monitoring regime because they were relatively small and faced competition from other airports or modes of transport (PC 2007).

In 2011, the Commission conducted its third inquiry into the economic regulation of airports. It again recommended the continuation of price monitoring but that Adelaide Airport be excluded from the regime (PC 2012a).

Australia's four largest airports by passenger numbers — Sydney, Melbourne, Brisbane and Perth — remain in the monitoring regime.

The light-handed economic regulatory regime

Airports in Australia operate under a light-handed economic regulatory regime that is designed to facilitate commercially negotiated outcomes. Airport users, including airlines and operators of landside services, negotiate directly with airport operators on charges and other terms of access to a range of infrastructure services. Commercial negotiations can provide direct investment incentives and link the interests of airport users to airport operations, and promote efficient investment in airports and related industries (PC 2002). Except for some regional services at Sydney Airport (chapter 7), governments do not intervene in the setting of charges or other terms of access. Instead, the Australian Government mandates the collection and publication of information about airports' financial and operational performance.

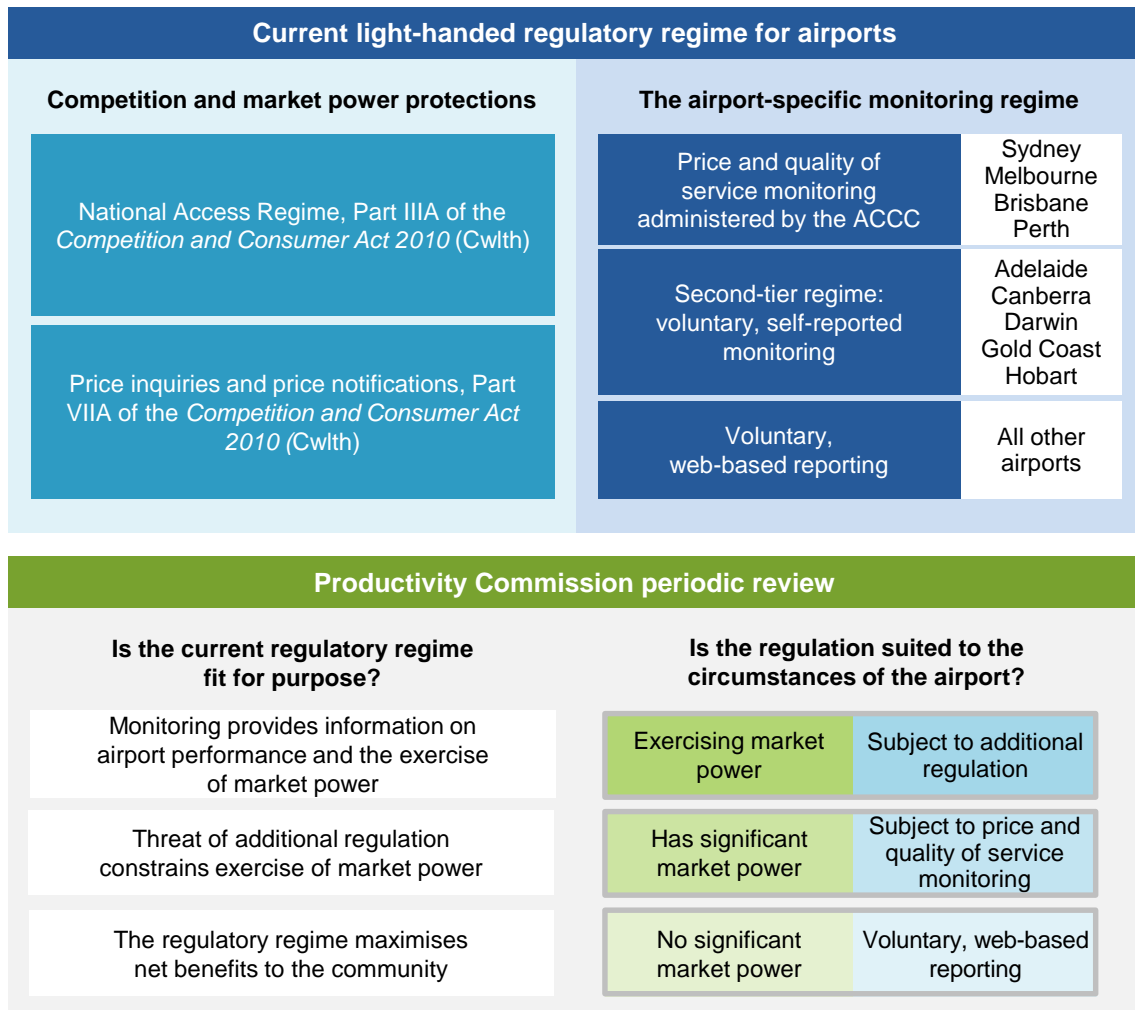
The Australian Government adopted a light-handed approach to regulation after the Commission's inquiry in 2002. The Commission suggested in that inquiry that price monitoring would lower the opportunity for regulatory error, compliance costs and the consequent distortions in incentives that occurred under the price cap arrangements that were in place.

The light-handed approach to the economic regulation of airports includes the general provisions of competition and consumer law, and airport-specific regulations that were introduced following the privatisation of airports (by long-term lease from the

Commonwealth) (figure 1.3). The level and type of regulation faced by an airport depends on whether it has market power and then whether it is exercising that market power.

Airports are also subject to a range of non-economic regulations, discussed below.

Figure 1.3 The economic regulation of airports



The ACCC monitoring regime

The ACCC administers a price and quality of service monitoring regime under directions issued through Part VIIA of the *Competition and Consumer Act 2010* (Cwlth) (CCA) and under Parts 7 and 8 of the *Airports Act 1996* (Cwlth) (the Airports Act).

The operators of airports subject to the monitoring regime — Sydney, Melbourne, Brisbane and Perth — are required to provide the ACCC with information annually on their prices, costs and profits for aeronautical services and car parking. At its discretion, the ACCC

collects financial information relating to landside access, including revenue and access charges for selected landside services, such as those used by taxis, hire cars and shuttle buses between off-airport car parks and the terminal. Airport operators provide this financial information on landside access voluntarily (figure 1.4).

Figure 1.4 **ACCC monitoring of airport services**



The ACCC also monitors the quality of some aeronautical and non-aeronautical services. Aeronautical quality of service monitoring includes terminal services, such as check-in availability and waiting times in immigration areas. It also includes aircraft-related services, such as the availability and standard of runways, aircraft parking and ground handling services. Non-aeronautical quality of service monitoring includes car parking and landside access services and facilities.

The ACCC publishes a report each year, presenting financial and quality information for each monitored airport and outlining general trends and developments across the industry. Aeronautical and non-aeronautical revenues, costs and assets are reported separately under a dual-till approach (box 1.3).

The reported data can be used to analyse airport performance and inform an assessment of whether an airport is exercising its market power. Transparent information on an airport operator’s performance can encourage improvements to service quality, and facilitate consultation and negotiation between airport operators and users. Comparisons of quality ratings across airports can facilitate competitive pressure among operators and provide incentives for them to improve their performance.

Box 1.3 Single-till, hybrid-till and dual-till approaches to economic regulation

The distinction between aeronautical and non-aeronautical revenue is important for the economic regulation of airports. There are three main regulatory approaches, known as single till, hybrid till and dual till. Under a single-till approach, the regulator considers all aeronautical and non-aeronautical revenues and costs together. In contrast, only costs and revenues that relate to aeronautical services are subject to regulatory oversight under a dual-till approach.

Regulatory approaches across jurisdictions differ depending on the extent to which non-aeronautical services are subject to regulation. The ACCC uses dual-till monitoring to report aeronautical and non-aeronautical revenues, costs and assets separately. It monitors all aeronautical services at the monitored airports, along with car parking and landside access activities, but does not monitor the prices and profits earned by an airport operator from other non-aeronautical services, such as retailing, business parks and factory outlets. Other countries have adopted a hybrid-till approach, where a proportion of non-aeronautical revenue is subject to regulatory oversight in addition to aeronautical revenue.

Other forms of monitoring and reporting

In addition to the ACCC's monitoring of the four major airports, a second tier of airports — Adelaide, Canberra, Darwin, Gold Coast and Hobart — are subject to a self-administered monitoring regime. These airports voluntarily publish information on their aeronautical charges, car parking, service quality and complaint handling procedures. Cairns Airport, which is operated under a 99-year lease from the Queensland Government and is not regulated under the Airports Act, voluntarily publishes the same information as the second-tier airports (but does not publish service quality outcomes). The Australian Government established the self-administered second-tier monitoring regime through a policy statement rather than regulation. The policy statement does not set out the level of detail airport operators must provide (the approach is different between airports) or any repercussions for operators who do not participate.

The Australian Government encourages airports that are not covered by the ACCC monitoring regime or the second-tier regime to publish the results of customer satisfaction surveys on their websites (Australian Government 2009).

The Productivity Commission's inquiries into the economic regulation of airports

The Commission has conducted inquiries into the performance of the economic regulatory regime for Australia's airports approximately every five years, beginning in 2000 (box 1.2). The Commission uses the ACCC's annual monitoring reports and other data to assess whether an airport is exercising its market power, including in its pricing and investment decisions. Essentially the Commission's role is to conduct a health check of the regime to determine whether it remains fit for purpose.

The Commission can recommend (among other things): adding airports to the monitoring regime or removing them; tightening or relaxing regulatory requirements for monitored airports; and sanctions for any airport found to have systematically exercised its market power to the detriment of the community. It would not hesitate to recommend regulatory changes, including price regulation, for any airport found to have systematically exercised its market power. The Commission recommended changes to the regulatory regime in each of the three previous inquiries and governments, for the most part, have implemented those recommendations. The ongoing threat of additional regulation acts as a deterrent against the exercise of market power.

Competition and market power protections

Airports that exercise their market power can also face consequences through general competition and market power protections.

Declaration of access to infrastructure services under the National Access Regime

The National Access Regime under Part IIIA of the CCA provides for regulatory declaration of access to certain infrastructure services. An airline, or any other party, can take action if commercial negotiations to access infrastructure services fail. A party can apply to the National Competition Council (NCC) to recommend that the relevant Minister declare those services under the National Access Regime. The Minister also has the power to direct the NCC to examine whether to declare a particular service. Any party (not just the original applicant) can seek to negotiate access to declared infrastructure. The National Access Regime provides a role for the ACCC to arbitrate access disputes where a service has been declared and commercial negotiations to access that infrastructure have failed.

The National Access Regime acts as a backstop for parties to seek third party access to airport and jet fuel infrastructure services, neither of which are regulated under specific access arrangements. There have been three applications for declaration of airport services since airports were privatised, with one resulting in declaration. Virgin Blue applied for declaration of specific airside services at Sydney Airport in 2002 and, after a lengthy appeals process, these services were declared in 2007. The Australian Government amended the declaration criteria for the National Access Regime in 2017. Inquiry participants argued that there is uncertainty about how the NCC would apply the declaration criteria and how the Courts would interpret the criteria if they were to review the Minister's decision.

Price inquiries and price notification

Part VIIA of the CCA provides for the ACCC to undertake price inquiries at the request of either the ACCC itself (with Ministerial approval) or the relevant Minister. The Commission could also recommend that the Minister direct the ACCC to undertake a price inquiry. The ACCC investigates prices and price movements of either a business or an industry during a

price inquiry. It may also investigate factors such as market structure, the level of competition, and potential impediments to efficient pricing. The ACCC has not recommended a price inquiry nor has the Minister requested it undertake one into airport services to date.

Under Part VIIA, the relevant Minister, or the ACCC with Ministerial approval, may declare goods or services to be subject to price notification. Price notification requires an airport to notify the ACCC before increasing the price of its goods or services. Sydney Airport is currently required to notify the ACCC of any price increases for aeronautical services provided to airlines operating flights to and from regional New South Wales (chapter 7). Airservices Australia is also required to notify the ACCC of any price increases for some specific services.

More broadly, Part IV of the CCA provides protection against restrictive trade practices such as cartel conduct under section 45 and the misuse of market power under section 46.

Other regulatory provisions

The Airports Act includes a number of conditions that airport operators must meet (box 1.4). The conditions relate to areas such as planning arrangements, demand management schemes, ownership and site ownership obligations, environmental management and safety, and are reflected in confidential federal lease agreements.

Airport lease requirements

Sydney, Melbourne, Brisbane, Perth, Canberra, Darwin, Hobart and Adelaide airports, among others, are subject to a range of lease conditions, including that the lessee must:

- supply services to air transport operators
- invest in airport infrastructure to meet current and expected demand
- obtain ministerial approval of a major development, such as a new runway or terminal.

Airport operators of the federally-leased airports can only deny an aircraft access to an airport in limited circumstances (AAA, sub. 50). For example, an aircraft can be denied access if the aircraft movement is beyond the declared capacity of the airport. An aircraft can also be denied access if the owner or operator of the aircraft has failed to pay the airport operator. The Australian Airports Association noted that, to the best of its knowledge, an aircraft has never been denied access to an airport on the basis of an airline failing to pay (sub. 50).

Legislated planning requirements

The Australian, State and Territory, and Local Governments, together with airports, share responsibility for planning at airports and on surrounding land. The planning application and assessment processes depend on the location of the airport and the nature of any proposed development. Federally-leased airports are subject to a planning framework under the

Airports Act (box 1.4). These airports are required to establish and regularly update a master plan and obtain approvals of major development plans for significant infrastructure projects.

Box 1.4 The Airports Act and other airport regulation

The *Airports Act 1996* (Cwlth) is the overarching legislation that governs airport activity at the federally-leased airports. The Airports Act provides for:

- the sale and the terms of the lease agreement between the airport and the Commonwealth
- ownership restrictions, including a 49 per cent limit on foreign ownership. In addition, airlines are not permitted to own more than 5 per cent of an airport, and there is a 15 per cent limit on cross-ownership between Sydney/Melbourne, Sydney/Brisbane and Sydney/Perth airports
- site usage obligations, including that an airport site must be used as an airport, and that an airport operator is not to carry out substantial non-airport trading or financial activities
- the master planning process, which sets out requirements for a 20-year forward plan to identify, among other things, development objectives, future aviation requirements, noise exposure forecasts and intentions for the use of land and related development
- the major development planning process, which is necessary for each major development, including the construction of a new (or changes to an existing) runway, or passenger terminal or where construction of a non-terminal building, taxiway, road or railway exceeds \$25 million
- the development of demand management schemes.

Airports are subject to the regulatory jurisdiction of the Civil Aviation Safety Authority (CASA) to maintain the safety of civil aviation under:

- *Civil Aviation Act 1988* (Cwlth)
- Civil Aviation Safety Regulations 1998 (Cwlth)
- Civil Aviation Regulations 1988 (Cwlth)
- CASA's Manual of Standards Part 139 – Aerodromes.

The airspace around an airport is regulated and administered by CASA under the *Airspace Act 2007* (Cwlth). The Airspace Regulations 2007 permit CASA to delegate air traffic control services.

Several other Commonwealth legislative instruments cover obligations relating to security, environmental issues and noise. These include the:

- *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth)
- *Air Navigation Act 1920* (Cwlth)
- *International Air Services Commission Act 1992* (Cwlth)
- *Aviation Transport Security Act 2004* (Cwlth)
- *Air Accidents (Commonwealth Government Liability) Act 1963* (Cwlth)
- *Civil Aviation (Carrier's Liability) Act 1959* (Cwlth)
- *Damage by Aircraft Act 1999* (Cwlth).

Source: DITCRD (2019a).

Airport master plans

Master plans are strategic documents that cover all aspects of an airport's operation and investment. They cover a period of 20 years and must be updated and approved by the Australian Government Minister for Infrastructure every five years for monitored airports and eight years for non-monitored airports. The master planning process seeks to align several planning laws, such as state and federal planning laws for airports, land transport laws and development laws. Master plans must cover, among other things:

- the future needs of passengers and other users
- noise issues and flight paths, including forecasting the effects of airport noise on surrounding communities
- landside transport arrangements, including a ground transport plan
- environmental issues
- commercial, community, office and retail developments
- employment levels and other effects on the local economy.

The master planning process requires that airports comply with other regulations that deal with the broader operational efficiency of airports (box 1.4). A key function of the master plan is to take a community-wide perspective in airport planning. Airports are required to consult widely with the community, as well as with Local and State and Territory Governments, when preparing master plans.

Major airport development plans

The Australian Government Minister for Infrastructure must approve major development plans when airport operators undertake significant infrastructure projects — those valued above \$25 million or that meet other criteria specified in the Airports Act. Airport operators are required to provide information and consult with the public regarding the effects of the specific development. They are also required to provide a detailed outline of the proposed development and its role in meeting the future needs of passengers and other users. Airport operators must show that the proposed development is consistent with the master plan and State or Territory, and Local Government planning requirements. Plans must also specify the effects of the proposed development on noise levels, flight plans, precinct traffic, the environment, and employment and other local economic effects.

Managing access to Sydney Airport

The Australian Government has enacted regulations to support access for airlines operating flights between Sydney Airport and regional New South Wales. These regulatory arrangements include a regional ring fence, and price cap and price notification regimes at Sydney Airport. The regional ring fence, introduced in 1998, reserves a number of slots at Sydney Airport for airlines operating flights to or from regional New South Wales. The price

cap and notification regime applies to aeronautical services and facilities that Sydney Airport provides to airlines operating regional flights. As noted above, Sydney Airport must notify the ACCC before it can increase its prices for these aeronautical services and facilities.

The Australian Government also has in place other arrangements to manage the negative effects of aircraft noise on the health and quality of life of residential communities near Sydney Airport. A curfew limits aircraft movements at Sydney Airport between 11 pm and 6 am, with some exceptions. A small number of pre-approved international flights can operate in the hour before the end of the curfew. A limited number of freight movements using the British Aerospace-146 (Bae-146) and small propeller driven and jet aircraft that meet noise standards are also allowed to operate in curfew hours (chapter 7). Aircraft movements are limited to 80 per hour, measured over a rolling hour every 15 minutes, during non-curfew times. Airport Coordination Australia allocates slots to airlines (permissions for aircraft movements at specific times) in line with the movement cap. Airservices Australia manages air traffic and ensures that the actual number of movements is consistent with the cap (chapter 7).

Commonwealth legislation and legislative instruments that set out the arrangements at Sydney Airport include the *Sydney Airport Demand Management Act 1997* (Cwlth), the *Sydney Airport Slot Management Scheme 2013* (Cwlth), the *Sydney Airport Curfew Act 1995* (Cwlth) and the *Sydney Airport Curfew Regulations 1995* (Cwlth). The price cap and notification regime operates through the CCA.

1.5 Characteristics of Australia's airports

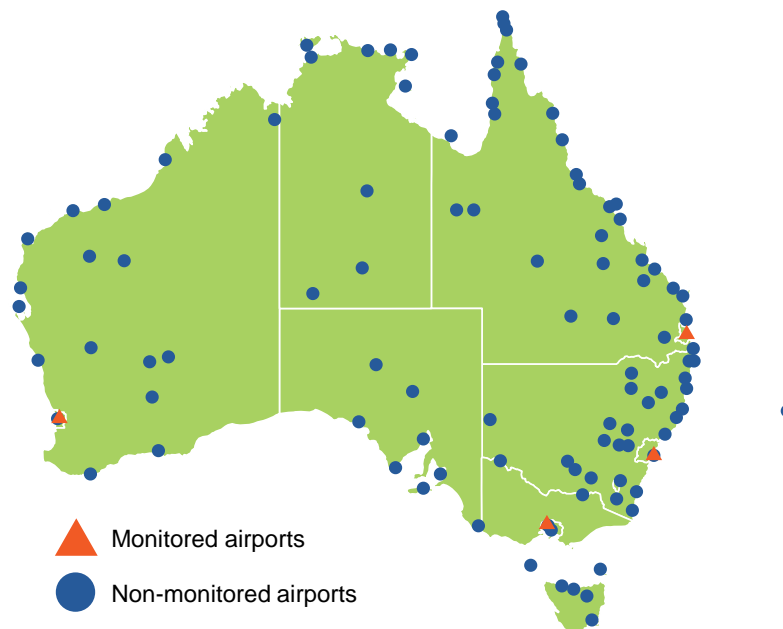
The characteristics of Australian airports vary significantly, with differences in size, ownership structure, location, and type of service offered. These characteristics influence the design of economic regulation, as they can affect the potential for an airport to have, or exercise, market power.

Airports vary in size and ownership structure

Over 100 airports in Australia offer regular public transport (RPT) services (figure 1.5). These airports range in size from small aerodromes in regional and remote areas through to Sydney Airport — Australia's largest airport by number of passenger and aircraft movements.

The four monitored airports accounted for about 72 per cent of Australia's international and domestic RPT passenger movements in 2017 (figure 1.6). Sydney Airport alone accounted for about 27 per cent of total RPT passenger movements. It is a publicly traded company and had more than 43 million passengers in 2017-18, 47 airline customers and a freight hub which transports about half of all Australian air freight and mail (by weight) (BITRE 2017a).

Figure 1.5 **Airports offering regular public transport services**



Source: BITRE (2017b).

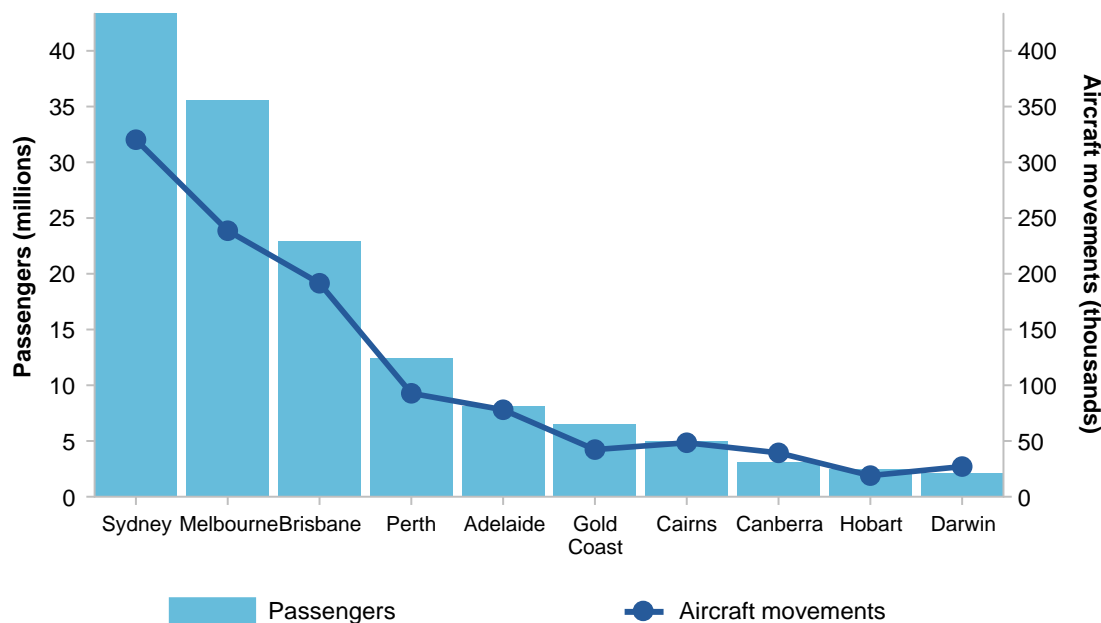
In comparison, some small regional airports service fewer than 10 000 passengers a year on RPT services. Other aerodromes, many of which are in remote areas, only cater to general aviation services, such as charter flights, leisure flying, agricultural services, and search and rescue. The monitored airports have significant land holdings. For example, the Sydney Airport site is 907 hectares, the Melbourne Airport site is 2663 hectares, the Brisbane Airport site is 2700 hectares, and the Perth Airport site is 2105 hectares (Brisbane Airport 2014; Melbourne Airport 2018a; Perth Airport 2014; Sydney Airport 2018c).

Most of Australia's busiest airports are privately operated under 50-year lease agreements with the Australian Government (box 1.2). There are now 21 federally-leased airports operated by private companies, including the four monitored airports and other airports such as Archerfield, Canberra, Essendon, Gold Coast and Hobart.

Changes in the ownership of Australia's regional airports occurred in the 1980s and 1990s. The Australian Government gradually transferred ownership of regional aerodromes to local councils under the Aerodrome Local Ownership Plan during this period. Many regional airports are owned and operated by local councils.

Figure 1.6 Australia's ten busiest airports^a

By passenger movements, 2017



^a Includes international and domestic passenger and aircraft movements.

Source: BITRE (2018a).

Some large regional airports that have RPT services, such as Cairns and Mackay, are leased by State Governments to private companies. Other regional airports, including Toowoomba Wellcamp and Hamilton Island are privately owned and operated. A number of privately owned airports support the resource sector. For example, BHP Billiton Mitsubishi Alliance owns and operates Moranbah Airport in Queensland.

The Royal Australian Air Force and the Royal Australian Navy are involved in some Australian airports, either separately or in conjunction with civilian operations. For example, the Air force uses Wagga Wagga, Newcastle, Darwin and Townsville airports alongside civilian airlines. The Navy operates through HMAS Albatross at Nowra and Jervis Bay.

Airport services are diverse

Airports provide different aeronautical and non-aeronautical services depending on airline and passenger needs. Small airports generally provide basic services including a runway, taxiways, hangars, a terminal and other essential services, such as jet fuel. Large airports, on the other hand, are highly complex businesses. They provide a range of services to a diverse set of customers, including passengers, airlines, freight-forwarding companies, businesses (such as car hire companies), retailers and business park tenants.

Aeronautical services and facilities

Aeronautical services and facilities are those that are necessary for the operation and maintenance of civil aviation. They include a range of fixed infrastructure used for the arrival and departure of aircraft, such as runways, taxiways and aprons, as well as refuelling services and maintenance facilities. Aeronautical services also include passenger and freight terminal services, such as check-in counters, baggage handling and boarding facilities. Airport operators manage most terminals and typically operate them under a common-user system, where multiple airlines share the facilities. Airlines have, in the past, managed terminals from the airport operator under a domestic terminal lease arrangement (box 1.5).

Box 1.5 Domestic terminal lease arrangements

Under a domestic terminal lease (DTL), airlines provide terminal services such as check-in and baggage facilities directly to passengers.

Airports and airlines are no longer negotiating DTLs. Brisbane Airport's two DTLs with Qantas and Virgin Australia Airlines (Virgin) expired on 30 December 2018 and 31 December 2018, respectively (Brisbane Airport, sub. 38). Perth Airport's DTL with Qantas expired at the end of 2018 and Terminal 4 reverted to Perth Airport operational control on 31 January 2019 (Perth Airport, sub. 51; Perth Airport, pers. comm., 23 January 2019). Melbourne Airport's DTL with Qantas is due to expire on 30 June 2019 (Melbourne Airport, sub. 33). A new 10-year operational licence between Melbourne Airport and Qantas for T1 will begin on 1 July 2019 (Melbourne Airport 2019b).

The ACCC's monitoring regime does not encompass the revenues, costs and profits associated with DTLs, although they are included in the information it provides on overall airport services. Further, the monitoring regime does not report on the quality of services at terminals subject to a DTL because airlines directly deliver the services to their own requirements.

Non-aeronautical services and facilities

Airport operators provide non-aeronautical services to passengers (such as car parks, or food and retail services within the terminal), and to other customers outside the terminal precinct. For example, each of the monitored airports, and some smaller airports such as Parkes Regional Airport, have business parks. Brisbane and Perth airports both have Direct Factory Outlet shopping centres. Other non-aeronautical developments include a proposed Costco at Perth Airport, scheduled for completion in 2020, and a surf park at Melbourne Airport, due to open in spring 2019 (Perth Airport, sub. 51; URBNSURF 2019).

Airport operators invest in non-aeronautical services for a number of reasons. Investing in both aeronautical and non-aeronautical services allows an airport operator to capture economies of scope — it is more efficient for the services to be delivered by the same provider than separately. This can particularly be the case for complementary services, such as car parking (box 1.6). An airport operator may also invest in, and deliver, non-aeronautical services to diversify its revenue and dampen the effects of potential aviation-specific risks on overall

performance. In this case, the airport would look to invest in non-complementary services, such as factory outlet, that are not affected by fluctuations in passenger numbers. The different market characteristics of these services, and implications for regulatory design, are discussed further in chapter 3 and chapter 9, respectively.

Box 1.6 Complementarity of airport services

Airports are multi-product businesses that provide a range of services to airlines, other businesses and passengers. This includes aeronautical services used by airlines, such as runways and maintenance facilities, and non-aeronautical services used by passengers, such as car parking or retail services. Demand for non-aeronautical services can increase with the quantity of aeronautical services demanded if they are complementary. An airport operator will often make pricing decisions taking into account the complementarity of aeronautical and non-aeronautical services. For example, a price increase in aeronautical charges may increase aeronautical revenue but could reduce revenue from complementary services such as car parking, if passenger throughput declines.

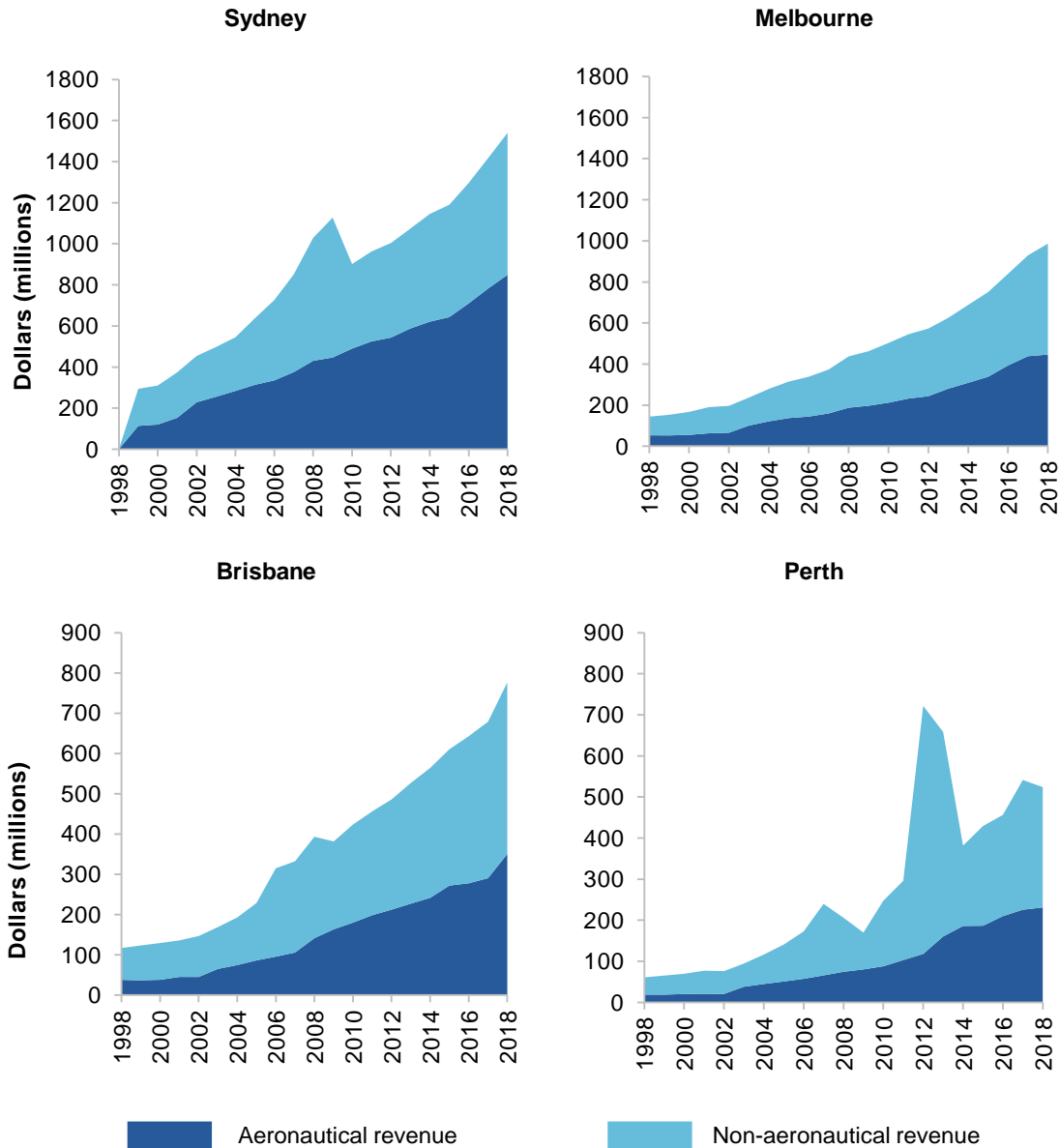
The extent of complementarity affects an airport operator's pricing and investment decisions. An airport operator will typically balance prices across different services in a manner that maximises its overall profits. The extent to which this acts as a constraint on an airport's market power is discussed in chapter 3.

Non-aeronautical services can represent a large proportion of airport revenue at airports both in Australia and overseas. The four monitored airports generate about half of their revenue and the majority of their profits from non-aeronautical services (figure 1.7) (chapter 3). In 2016-17, Sydney Airport's revenue from retail services accounted about 40 per cent of its non-aeronautical revenue, while property and car rental revenue accounted for about 30 per cent (Commission estimates based on Sydney Airport 2018a). Non-aeronautical revenue can be more variable than aeronautical revenue at some airports — there was a significant increase in non-aeronautical revenue at Perth Airport during the resources boom that quickly dropped off in the years following.

Australian airports require large investments

Airports are capital-intensive businesses that require ongoing investment to keep up with demand for services from airlines and passengers. They have 'lumpy' investment schedules, given the need for large capital infrastructure like terminals and runways. Airports often require investments to expand airport capacity and facilitate new air transport services, such as the purchase of land or building new terminal and runway infrastructure, to meet growing demand for air transport services.

Figure 1.7 Revenue at the monitored airports
By aeronautical revenue and non-aeronautical revenue



Source: ACCC (2019) and various back editions.

The four monitored airports invested about \$8 billion in aeronautical infrastructure over the ten-year period to 2017-18 (ACCC 2019). Three of Australia’s major airports have capacity expansions in design or under construction, with new runways due to commence operation at Brisbane Airport (by 2020), Melbourne (2024) and Perth (2028) (ACCC 2018; Perth Airport 2018). Canberra Airport (2018) has also planned upgrades to existing runways and terminals.

Airports have high fixed costs and relatively low ongoing operating costs, so they often have declining average costs (known as economies of scale). A single airport can typically provide some services more efficiently than two or more airports. This can lead to an enduring lack of effective competition and, potentially, market power (chapters 2 and 3).

Australia's airports are critical infrastructure and airports that face limited competition could have market power that, if exercised, would be detrimental to the community. An airport operator exercising its market power could mean that users of airport services — passengers and airlines — face unduly high charges, poor service quality, or both. The economic regulation of airports must keep that market power in check, while promoting efficient airport (and airline) operations and timely investment in infrastructure.

2 Analytical framework

Key points

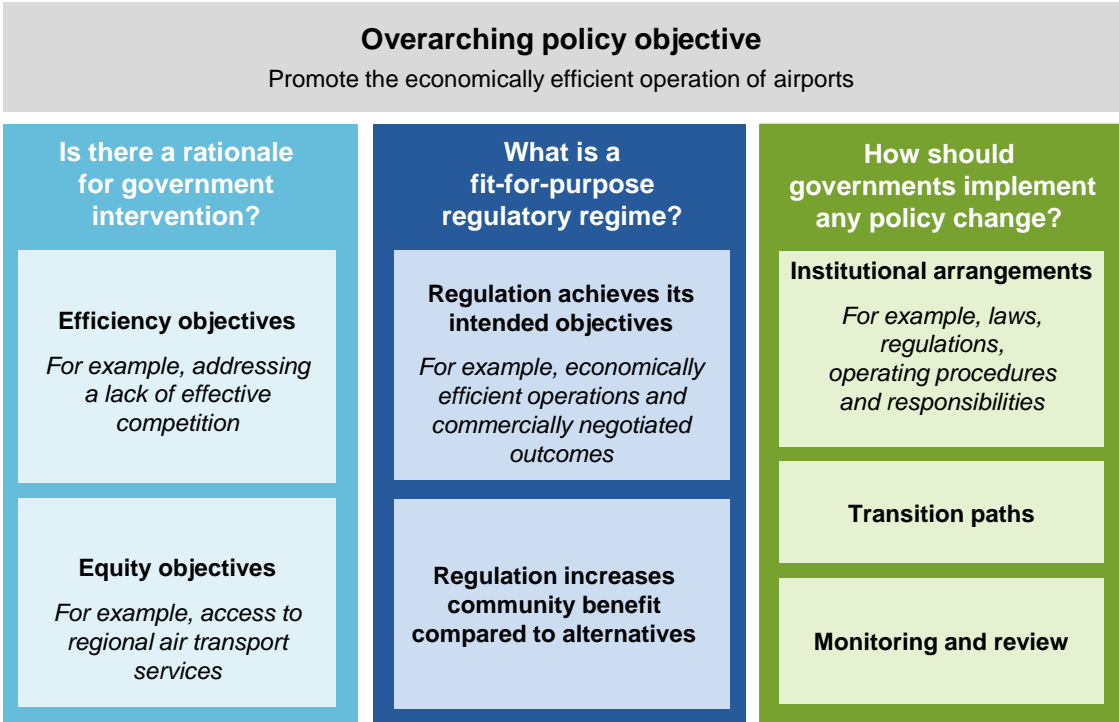
- An enduring lack of effective competition can lead to a provider of airport services having market power. This may compromise the economically efficient operation of airports to the detriment of the community.
- The rationale for the economic regulation of airports is that an airport operator with market power could *exercise* that power by setting unduly high charges, operating the airport inefficiently, or making inefficient investment decisions.
 - An airport operator exercising its market power may underinvest to increase profits, but is unlikely to have an incentive to overinvest. It could use its market power to raise prices to earn higher profits without needing to invest in additional infrastructure.
- The Commission assessed whether airport operators have exercised their market power to the detriment of the community based on indicators of airports' operational and financial performance, and the conduct of commercial negotiations between airport operators and service users.
 - A conceptual benchmark for an efficient level of pricing is the long-run average cost or, in the case of capacity constraints, users' willingness to pay.
 - The Commission examined airports' performance in aeronautical services separately from non-aeronautical services. Analysing whole-of-airport performance could reveal whether an airport's total profits exceed some benchmark, but would not show whether profits are due to the exercise of market power in aeronautical services specifically.
- A light-handed regulatory regime requires transparency as to how an airport operator is performing over time, and a credible threat of additional regulation.
 - Monitoring can provide performance information to assess whether an airport operator has exercised its market power to the detriment of the community.
 - The ongoing threat of additional regulation acts as a deterrent against the exercise of market power.
- The test for any policy change is whether it would generate the greatest increase in the welfare of the Australian community compared with other options, including the status quo.
 - The mere fact that an airport has market power is, by itself, insufficient to justify a change to the regulatory regime. The Commission's assessment considered the constraints an airport operator faces, including the countervailing power of airlines, which limits an operator's ability to exercise its market power.
 - The Commission would not hesitate to recommend regulatory changes, including price regulation, if it found in the future that airport operators had systematically exercised their market power to the detriment of the community.

The Australian Government has asked the Commission to consider a range of issues related to airport services, including aeronautical services, car parking and landside access, regional access arrangements at Sydney Airport and competition in markets to supply jet fuel.

The Commission has analysed each issue in a consistent manner according to the framework presented in figure 2.1. The Commission has considered the case for government intervention, whether the current approach to economic regulation is fit for purpose, or whether there are alternatives that would result in greater net benefits for the community.

This chapter outlines the key concepts used in this inquiry and the Commission’s approach to assessing whether the economic regulation of airports is fit for purpose.

Figure 2.1 Assessing the economic regulation of airports



2.1 Why do governments intervene?

Efficiency objectives

Governments intervene to support economic efficiency objectives, where the market fails to deliver the best allocation of resources for the community. In theory, achieving economic efficiency satisfies three requirements: allocative, productive and dynamic efficiency (box 2.1). In reality, no market is perfectly efficient. However, the concepts of economic efficiency can inform an assessment of the case for government intervention and the extent to which a market generates outcomes that are in the best interests of the community.

Box 2.1 Requirements for economic efficiency

The efficient firm is a useful theoretical concept to assess whether outcomes are economically efficient. An efficient firm (as well as industry, sector or economy) satisfies three requirements.

- Allocative efficiency — the type and mix of different goods and services produced are of the highest value for consumers compared with any alternative use of the given resources. A lack of effective competition (discussed below) can mean that firms have an incentive to maximise profits by reducing supply and raising prices. This reduces allocative efficiency as it results in an underproduction of particular goods or services.
- Productive efficiency — goods or services are produced at the least possible cost for a given quantity or quality. For services with natural monopoly characteristics, a single service provider can achieve greater productive efficiency than multiple providers (box 2.2). An inefficient firm reduces productive efficiency, for example, by allowing costs to rise or not adopting new technology.
- Dynamic efficiency — productive and allocative efficiency are achieved over time.

Governments typically intervene in a market for a range of factors that affect efficiency, such as a lack of effective competition, the presence of externalities or information asymmetries.

A lack of effective competition

Effective competition requires that firms are subject to a reasonable degree of competitive constraint from actual or potential competitors, or from customers (PC 2013b). There may be a lack of effective competition in a range of circumstances, including where:

- the market has the characteristics of a natural monopoly, meaning that one infrastructure provider can service demand from existing and foreseeable customers at a lower cost than multiple providers, each with their own facilities (box 2.2)
- a single or small number of firms control access to a good or service that is an essential input for production, and are able to deny access to potential competitors.

An enduring lack of effective competition can lead to a provider of airport services having market power. This may compromise the economically efficient operation of airports to the detriment of the community. The Commission noted in the *National Access Regime* inquiry:

... a lack of effective competition can impose costs on the community where this allows service providers to restrict output and maintain prices above allocatively efficient levels. (2013b, p. 72)

Firms could exercise their market power to increase their profits, for example, by setting unduly high charges, or lowering the service quality or quantity but charging the same price.

Infrastructure assets commonly display natural monopoly characteristics because they have high fixed costs and relatively low operating (marginal) costs. Markets for *some* airport services, such as runways, display natural monopoly characteristics, meaning that there is the potential for a provider of those services to have market power — explored in section 2.2.

Box 2.2 **Natural monopoly characteristics**

A market has natural monopoly characteristics if it has high fixed costs and relatively low operating (marginal) costs, so that average cost declines with output. Declining average costs (known as economies of scale) can mean that one provider can meet existing and foreseeable market demand at a lower average cost than when there are multiple providers in the market.

A market can also have natural monopoly characteristics if it has *increasing* average costs (known as diseconomies of scale). For example, congestion (excess demand) at a capacity-constrained facility can lead to an increase in the incremental cost of producing an additional unit of output. The facility provider faces increasing average costs, but the total costs of production could still be less than a market with two or more providers. The market still has natural monopoly characteristics, even with increasing average costs, as it is more efficient to have one provider than multiple.

However, a single provider with increasing average costs is unlikely to be efficient if there is *enduring* excess demand. A provider that faces ongoing congestion and is unable to expand capacity may not be able to produce at least cost compared with two or more providers. In this case, the market no longer has natural monopoly characteristics, and competition would produce a more efficient outcome. For example, if an airport faces ongoing congestion and cannot add additional capacity, satisfying demand might require the development of a new airport.

A natural monopoly producer can also be characterised by economies of scope. This occurs where a firm produces more than one type of good or service, and it is less costly to provide these related goods and services together, rather than separately. For example, an airport has economies of scope across aircraft-related services and facilities like runways, taxiways, and aircraft parking, as the total cost for one operator to provide these services is likely to be less than if there are multiple providers.

Sources: PC (2002, 2013b).

The presence of externalities

Externalities occur when the production or consumption of goods and services imposes costs or benefits on others that are not taken into account in the setting of prices. Externalities lead to an inefficient allocation of resources as the private costs and benefits of an activity are different from the total social (private plus external) costs and benefits.

Airport services have the potential to generate a range of externalities. For example, aircraft movements at airports and along flight paths generate noise that affects nearby communities. Governments have implemented policies that manage these negative externalities — for instance, Sydney and Adelaide airports have curfews to reduce noise disturbance for nearby residents at night (chapter 7). Airports must comply with noise abatement procedures published by Airservices Australia (ASA 2019a). There are also externalities associated with the provision of airport security services (box 2.3).

Box 2.3 The costs and benefits of airport security

Who benefits from airport security?

Airports and airlines benefit from incorporating security procedures into their operations. They will invest in security services in the absence of regulation to protect their assets and to maintain their reputation and passenger numbers. However, an airport or airline operator acting in its private interest is unlikely to supply a level of security services that fully accounts for the broader social benefits, such as:

- preventing aviation safety risks that could result in property damage, personal injury, enduring psychological effects, loss of life and adverse effects on economic activities, such as tourism
- reducing theft, smuggling, tariff evasion and supporting improved export controls
- maintaining a national reputation for safety in trade, tourism and conduct of business.

The benefits of airport security link to the network effects of airports. Airports are part of a network connected by air transport services. This means that the benefits of increasing the level of airport security at one airport increases as other airports also adopt these security measures.

The Australian Government regulates aviation security through minimum security requirements for airport operators, with the intention that security services are provided at a level that reflects the broader social benefits. Government decisions, however, are only proxies for what the community might otherwise decide to fund.

Who bears the cost of airport security?

The Australian, State and Territory governments, airports and passengers share the costs of airport security. Airports cost-recover safety and security charges from airlines, which airlines pass through (in full or in part) to passengers. Passengers also incur the costs associated with queues and wait times for airport security.

The efficiency of payment arrangements for the provision of airport security depends on how costs are allocated and recovered. In principle, an economically efficient outcome requires those who benefit from a service to pay the cost. The Commission has previously identified that ‘... governments should try to avoid paying for security measures that the aviation sector would take anyway’ (PC 2018, pp. 54–55).

In practice, it is difficult to apportion the costs of security between the aviation industry, passengers and the broader community. This is in part due to challenges in estimating the private and social benefits of airport security in preventing harm, and the likelihood and consequences of security breaches. There is also uncertainty regarding the extent to which passengers are willing to pay higher fares in exchange for shorter queues.

In addition to the practical challenges in estimating the value of the benefits, there is a lack of transparency regarding both government expenditure and cost pass through from airports and airlines alike. It is therefore unclear the extent to which those who benefit from airport security currently bear the cost, and this further limits an assessment of the efficiency of current arrangements. The Commission has previously concluded that:

A review of the aviation security system as a whole, including costs, effectiveness and trade-offs for each measure, may be warranted, as has been recommended in the United States. (2018, p. 59)

Sources: Prentice (2015); PC (2012a, 2018).

Inadequate or asymmetric information

Although most market transactions involve parties making decisions based on different levels of information, a major imbalance of information can allow one party to gain a significant advantage at the expense of others. For example, a party may have more bargaining power if it is privy to information that could influence the transaction and that other negotiating parties do not know (chapter 4). Government intervention to reduce an imbalance of bargaining power in market transactions is only relevant where the imbalance leads to outcomes that are detrimental to the community. Some participants have argued that governments should require airports to provide additional information to address information asymmetries and an imbalance of bargaining power in negotiations. Information sharing in commercial negotiations is discussed in chapter 4.

Sunk investments as an alternative rationale for intervention?

The Australian Competition and Consumer Commission (ACCC) has suggested that sunk investments in some infrastructure services provide a rationale for additional regulation. The Commission concluded in previous inquiries that, in practice, factors such as long-term contracts limit the extent to which sunk investments create a rationale for government intervention in airport services (box 2.4). This inquiry has therefore focused on whether airports are exercising their market power to the detriment of the community (section 2.2).

Box 2.4 **Regulating to protect relationship-specific sunk investments**

Airlines and other airport users may wish to make investments, such as customised facilities, at a particular airport to maximise the value of the product they offer. The Australian Competition and Consumer Commission noted that if this investment is sunk — it has no alternative use or value — it is subject to the threat of hold-up. Hold-up is the risk that an airport operator will raise charges to capture the value of another party's investment *after* it has made the investment, reducing the incentive for airline operators to undertake an efficient level of investment. The Australian Competition and Consumer Commission noted that the failure to make such investments is another form of economic inefficiency and therefore a source of economic harm requiring regulation.

The Commission considered this rationale in its 2011 inquiry into the *Economic Regulation of Airport Services* and in other previous inquiries, including *Electricity Network Regulatory Frameworks*. It noted that, in practice, other factors can reduce the extent to which hold-up occurs. In particular, airports and airlines in Australia often mitigate the risk of hold-up by using long-term contracts. It is also not clear that airlines' relationship-specific sunk investments are significant, particularly in the case of low-cost carriers, which have lower overheads than full service airlines and the ability to change routes relatively quickly (chapter 3).

Sources: ACCC (sub. 59); PC (2012a, 2013a).

Equity objectives

Equity refers to the fairness of the distribution of society's resources and opportunities for its members. Along with efficiency, equity is intrinsic to community welfare. For example, governments sometimes intervene to ensure that regional towns and cities have access to air transport services where they are not commercially viable. The Australian Government stated its ongoing commitment to maintaining access for regional communities into Sydney Airport in the terms of reference for this inquiry. The effectiveness of these arrangements is discussed in chapter 7.

2.2 Market power in airport services

How could airport operators exercise market power?

The rationale for the economic regulation of airports is that an airport operator with market power could exercise that power by setting unduly high charges, operating the airport inefficiently, or making inefficient investment decisions.

An airport's market power depends on its operating environment

An enduring lack of effective competition can lead to a provider of airport services having market power, as noted above. The extent to which an airport operator has market power depends on the characteristics and constraints of its operating environment. These characteristics include barriers to entry or exit, competition from nearby airports, opportunities for airlines to switch to another airport, and the nature of passenger demand for air travel, including alternative means of transport. The Commission's assessment of which airports have market power is presented in chapter 3.

Even if an airport operator has market power, it is not always able, or incentivised, to use it. Constraints on the exercise of market power include:

- countervailing power, along with other forms of bargaining power, that enables a customer to prevent or at least mitigate the ability of an airport operator to exercise its market power
- a level of demand for airport services that means the average cost of running an airport is higher than what passengers and airlines are willing to pay (Frontier Economics, trans., p. 456). This is the case at some regional airports.

An airport operator that exercises its market power also faces the threat of additional regulation from government. The Commission would not hesitate to recommend regulatory changes, including price regulation, if it found in the future that airport operators had systematically exercised their market power to the detriment of the community. The ongoing threat of additional regulation acts as a deterrent against the exercise of market power (chapter 9).

A significant level of market power creates a *prima facie* case for regulatory intervention, even when taking into account the constraints on that power. The potential for market power in domestic and international aeronautical services is explored in chapter 3.

An operator exercising market power could charge, operate or invest inefficiently

While an airport operator may have market power in some airport services, the Commission is primarily concerned about an operator *exercising* that power to the detriment of the community. Airport operators that exercise their market power could:

- price services at unduly high levels and reduce supply to increase profits at the expense of consumers (explored further below)
- lower service quality below users' reasonable expectations for a given price. An airport could reduce staffing levels, alter the utilisation of inputs, or replace assets infrequently, to the detriment of service quality
- underinvest in facilities, resulting in declining service quality over time. Underinvesting in infrastructure can lead to capacity constraints and an airport operator could restrict supply and price services at unduly high levels to create scarcity rents (discussed below).

An airport operator could also allow costs to rise if it has limited incentives to operate efficiently. This inefficiency may not lead to additional profits, but would provide a quiet life for managers. It could also deteriorate service quality below users' reasonable expectations, to the detriment of airlines and passengers.

Identifying the potential exercise of market power in airport services

The Commission has drawn on the available evidence to determine whether an airport has systematically exercised its market power. This includes examining: aeronautical charges; other indicators of operational and financial performance, such as input utilisation and rates of return; evidence of underinvestment in infrastructure over the investment cycle; and the conduct of commercial negotiations between airport operators and service users.

Inefficient prices can reflect an airport operator exercising its market power

The Commission's approach to identifying the exercise of market power has drawn on the *Aeronautical Pricing Principles* (box 2.5). These principles outline the Australian Government's expectations for how airport operators should set access charges for aeronautical services. For example, they emphasise that aeronautical charges should reflect the efficient cost of providing services and that parties should negotiate in 'good faith' to determine these charges.

An airport operator that is exercising its market power could increase its profits from aeronautical services by setting unduly high charges that are above an efficient level. The Commission has considered whether aeronautical charges are in excess of efficient levels

(chapter 5). The Commission has also considered whether prices are efficient in markets for other airport services such as airport car parking and landside access (chapter 6), as well as markets to supply jet fuel (chapter 8).

Box 2.5 *The Aeronautical Pricing Principles*

The Australian Government set out the *Aeronautical Pricing Principles* in 2007 (Costello 2007). The principles articulate how airports should set access charges for aeronautical services and facilities, as defined in Part 7 of the Airports Regulations 1997. The current principles are:

- a) that prices should:
 - (i) be set so as to generate expected revenue for a service or services that is at least sufficient to meet the efficient costs of providing the service or services; and
 - (ii) include a return on investment in tangible (non current) aeronautical assets, commensurate with the regulatory and commercial risks involved and in accordance with these Pricing Principles;
- b) that pricing regimes should provide incentives to reduce costs or otherwise improve productivity;
- c) that prices (including service level specifications and any associated terms and conditions of access to aeronautical services) should:
 - (i) be established through commercial negotiations undertaken in good faith, with open and transparent information exchange between the airports and their customers and utilising processes for resolving disputes in a commercial manner (for example, independent commercial mediation/binding arbitration); and
 - (ii) reflect a reasonable sharing of risks and returns, as agreed between airports and their customers (including risks and returns relating to changes in passenger traffic or productivity improvements resulting in over or under recovery of agreed allowable aeronautical revenue);
- d) that price structures should:
 - (i) allow multi-part pricing and price discrimination when it aids efficiency (including the efficient development of aeronautical services); and
 - (ii) notwithstanding the cross-ownership restrictions in the Airports Act 1996, not allow a vertically integrated service provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher;
- e) that service-level outcomes for aeronautical services provided by the airport operators should be consistent with users' reasonable expectations;
- f) that aeronautical asset revaluations by airports should not generally provide a basis for higher aeronautical prices, unless customers agree; and
- g) that at airports with significant capacity constraints, peak period pricing is allowed where necessary to efficiently manage demand and promote efficient investment in and use of airport infrastructure, consistent with all of the above Principles. (Costello 2007)

Long-run average cost is a benchmark for efficient prices

The Commission's preferred conceptual benchmark for assessing the efficient pricing of infrastructure services is long-run average cost, as it reflects the cost (including opportunity costs) of the resources required to provide an infrastructure service. Firms operating in a competitive market that are not natural monopolies would price at or close to this benchmark. Long-run average cost is also the minimum that a natural monopoly producer could charge to ensure it remains viable over time (box 2.6).

Box 2.6 Pricing services with natural monopoly characteristics

Different approaches to pricing affect a firm's profitability in providing services in markets with natural monopoly characteristics, where marginal costs are typically below average costs. The approaches below assume that firms charge different consumers the same (uniform) price.

Marginal cost pricing

Marginal cost pricing is typically the efficient pricing benchmark for competitive markets, at price P_{mc} where marginal cost intersects with demand. However, pricing in markets with natural monopoly characteristics at marginal cost would not cover the full costs of providing the service, as average cost is greater than marginal cost. In the diagram below, the green shaded region represents the losses sustained by a firm in a market with natural monopoly characteristics, at price P_{mc} and producing quantity Q_{mc} . The losses are equal to the difference between price P_{mc} and average cost, multiplied by the quantity of service Q_{mc} .

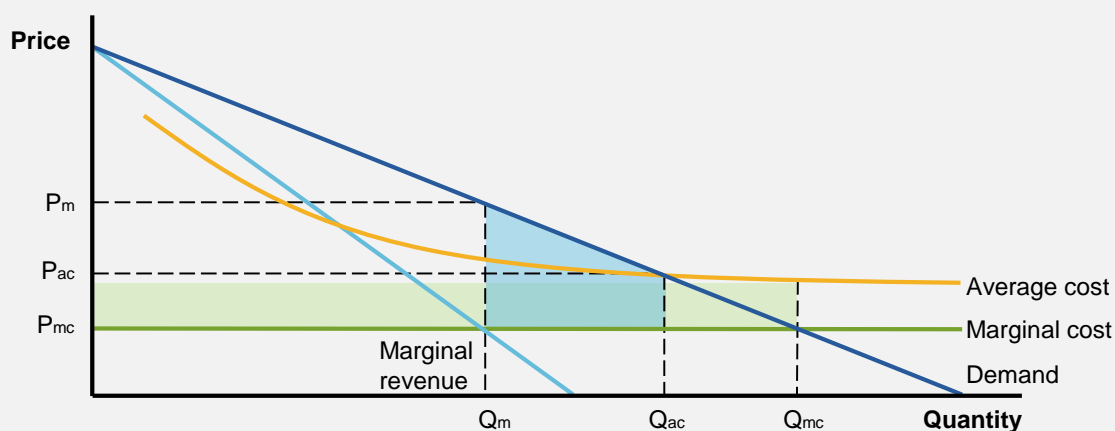
Monopoly pricing

Typically, a monopolist will maximise its profits by reducing the total quantity of services it supplies to the market to Q_m (where marginal cost equals marginal revenue) in order to increase the price charged to P_m . A firm exercising its market power may therefore raise prices above both marginal cost pricing P_{mc} and average cost pricing P_{ac} (at the intersection of average cost and demand).

Average cost pricing

The average cost is the lowest price a firm can charge for infrastructure services in markets with natural monopoly characteristics that is sustainable over time. In the diagram below, this is the price P_{ac} at the intersection of average cost and demand. The blue shaded region, under the demand curve and between Q_m and Q_{ac} represents the allocative efficiency gained from average cost pricing compared with monopoly pricing.

There are still efficiency losses under average cost pricing compared with marginal cost pricing, as there is an underproduction of services (quantity Q_{ac} compared with Q_{mc}). This could be reduced if a firm is not limited to uniform pricing and could charge a different price to different customers (first-degree price discrimination) or segments of customers (third-degree price discrimination). The efficiency of pricing options also depends on the activities of downstream firms, such as airlines. These concepts are discussed further below.



The Commission adopted this approach in previous airports inquiries, along with its 2013 report on the *National Access Regime*.

The allocative efficiency costs of a lack of effective competition can be compared with a benchmark where the service provider charges a price equal to its average cost of supply. Large sunk costs and relatively small marginal costs of supply mean that an infrastructure service provider can be operating at a point where its average cost declines with increasing output. In these circumstances, the lowest price the service provider could sustain in the longer term is average cost, where it just breaks even. This provides a reasonable conceptual benchmark for evaluating the effects of monopoly provision of infrastructure services on allocative efficiency. (2013b, p. 77)

Frontier Economics argued that long-run average cost is not an appropriate benchmark for efficient charging for aeronautical services. It considered that airports are multisided platforms, which require a single-till approach to economic regulation.

Prices on one side of the platform need not reflect the cost of serving that side. The operator of a platform will balance the participants on the many sides of the platform. For this reason, one cannot assess the monopoly power of an airport by comparing the price of one of its products with its long-run average costs. (Frontier Economics, trans. p. 456)

The Commission remains of the view that long-run average cost is an appropriate conceptual benchmark for assessing the exercise of market power and is consistent with the adoption of a dual-till approach to economic regulation (box 2.7).

Box 2.7 Assessing market power with a single-till, hybrid-till or dual-till approach

The Commission examined airports' performance in aeronautical services separately from non-aeronautical services — known as a dual-till approach (chapter 1).

Participants in the inquiry debated the merits of single-, hybrid- and dual-till approaches. Airlines for Australia and New Zealand stated that it is necessary to assess market power across all airport services using a single-till approach, while Qantas Group (Qantas, QantasLink and Jetstar) advocated for a single- or a hybrid-till approach (chapter 9) (A4ANZ, sub. DR106; Qantas Group, sub. DR115). There are advantages and disadvantages for each approach — see for example Qantas Group (sub. 48) or PC (2002) for further discussion.

The Commission has previously noted concerns with the use of a single-till approach.

Though airports are likely to offer incentives to encourage aeronautical traffic in order to increase profits from related commercial activities, mandating the transfer of non-aeronautical rents is likely to discourage development by the airport of both aeronautical and non-aeronautical services, generating large efficiency losses in the long run. Indeed, reversion to a regulated single till, even on a partial basis, could stifle the risk-taking, innovation and development of the airport site that are regarded as major benefits of privatisation (as well as raising issues of sovereign risk). (PC 2002, p. XXXIII)

The Commission considers that a dual-till approach is the most transparent approach to assessing if an airport operator is exercising its market power — it provides more information about airport revenues and costs than other approaches (chapter 9). A dual-till approach is consistent with the monitoring approach undertaken by the Australian Competition and Consumer Commission.

An approach that assesses aeronautical and non-aeronautical services together would obscure important detail. Analysing whole-of-airport performance could reveal whether an airport's total profits exceed some benchmark, but would not show whether profits could be attributed to the exercise of market power in aeronautical services specifically (chapter 5).

Long-run average cost is a conceptual benchmark that cannot be calculated in practice. Each airport has unique cost structures and drivers that depend on the range of services offered, and these costs can be difficult to observe and compare across sites. For example, the costs of a small regional airport are very different to a monitored airport.

Other indicators can provide evidence to assess whether an airport is charging above this benchmark. For example, return on aeronautical assets is the measure of profitability that most appropriately accounts for the long-run average cost of an airport's aeronautical investments. It accounts for the level and timing of investment and the opportunity cost of alternative investments (chapter 5).

Efficient prices under scarcity reflect willingness to pay

Long-run average cost is not a reasonable benchmark for efficient prices at an airport with capacity constraints. When a facility reaches capacity, an operator has an incentive to ration services, for example by increasing prices above the costs of delivering the service. Typically, this is based on what the consumer is willing to pay.

Rationing services by increasing prices above the long-run average cost can generate scarcity (or congestion) rents. Scarcity rents are a type of economic rent (payments above the cost of production, including opportunity cost) that a producer could earn with excess demand for a given quantity. These rents can arise in markets for infrastructure services that require significant upfront investment. In the context of airports:

... scarcity rents can arise in functioning competitive markets (otherwise, [t]here would be the business case for ever expanding capacity). They are a natural consequence of the lumpiness of major airport investment, whether on the airfield or relating to terminals. Lumpiness is likely to mean under-use at the beginning of an investment's life and over-use and/or the choking off of excess demand later on. (Bush, sub. DR93, p. 7)

An airport operator can also ration services using non-price mechanisms, such as a slot management system that allocates a finite number of aircraft take-off and landing permissions to airlines.

Rationing demand in the case of capacity constraints is essential and doing so benefits the community, if it efficiently allocates a scarce resource among consumers. It can also provide incentives for an infrastructure owner to make further investments in capacity. The lumpy nature of investment cycles of certain infrastructure services can mean some level of scarcity maximises community benefit, and results in efficient investment in infrastructure.

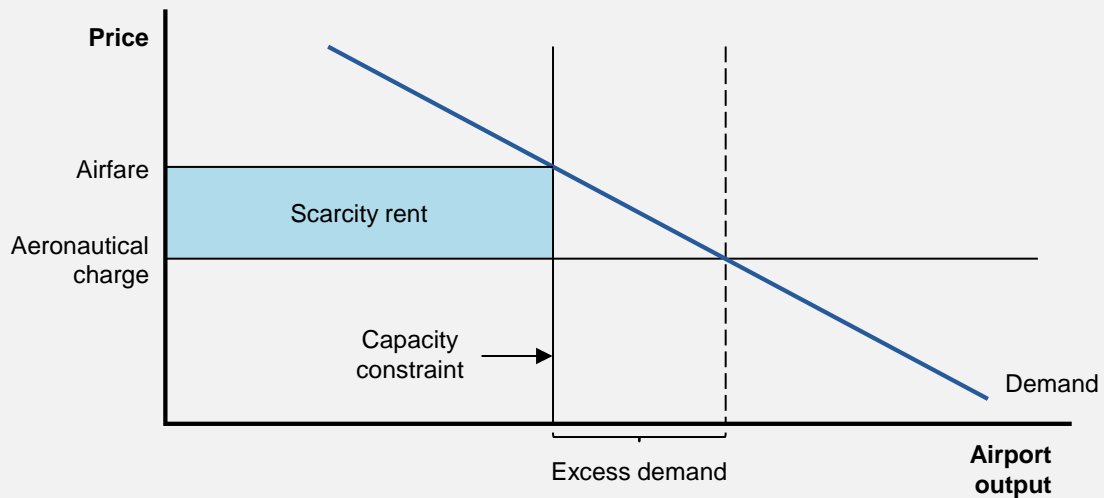
Whether an airline or the airport operator captures the scarcity rents at a capacity-constrained airport depends on how aeronautical charges and airfares are set (box 2.8).

Box 2.8 Aeronautical charges, scarcity rents and airfares

Deliberately underinvesting in infrastructure can lead to inefficient outcomes — airport operators could price services at unduly high levels to create scarcity rents or allow service quality to decline. In cases where an airport *cannot* increase its capacity, congestion charging can improve outcomes by balancing demand and available capacity, and would generate scarcity rents.

For example, Sydney Airport operates at or near capacity in peak periods. Sydney Airport also faces regulatory constraints associated with a limit on aircraft movements, a slot management system for runway access and a curfew. However, Sydney Airport charges a flat rate for aeronautical charges regardless of the level of demand or time of day.

Airline operators are able to adjust their passenger airfares based on demand in peak periods, allowing them to earn rents on scarce aircraft movement slots. Growing demand will likely result in larger scarcity rents. Under this framework, if aeronautical charges increased, but were still below the market clearing price, passenger airfares would remain unchanged but airline operators would lose some of their scarcity rents. In practice, the outcome depends on the extent of benefits passed on by airline operators to passengers through airfares (discussed below).



Sources: AAA (sub. 50); Bush (sub. DR93); Forsyth (sub. 15); SEO (2015); Sydney Airport (sub. 53).

Locational rents are another type of economic rent that can result from the efficient management of scarcity, and are distinct from monopoly rents (which is a type of economic rent that is not efficient, as discussed below). The ACCC noted, in the context of airport car parking prices, that:

To some degree, these prices reflect value of the land; that is, the convenience of parking within a short walk from airport terminals and the willingness to pay for that convenience. Of course, another reason for the different prices between different carparks is the need for airports to manage growing demand for space near the terminal entrances. These are referred to as locational factors.

It is efficient for prices to be set with consideration of locational factors. However, airports still have the ability to raise prices above efficient levels (i.e. collect revenue in excess of locational rents, referred to as monopoly rents), particularly for services where they possess significant market power. (sub. 59, pp. 43–44)

How airport operators and airport users share economic rents between them depends on their bargaining power and the characteristics of the market. To some degree, both profit-maximising airport operators and profit-maximising airport users may be able to influence prices and seek to transfer rents from the other party.

Other indicators signal airports' inefficient operational and financial performance

The Commission has examined a range of indicators of operational and financial performance at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) (chapter 5). These include:

- rates of return, which can indicate that an airport is exercising its market power to charge unduly high prices and yield excessive returns. In practice, rates of return vary over time. The lumpy nature of airport investment cycles means that assets can be relatively fixed, but their value will depreciate and result in varying rates of return
- infrastructure utilisation, which can indicate whether congestion or investment levels are inefficient or do not meet users' reasonable expectations for a given price
- service quality, including objective measures (such as the number of check-in kiosks) and subjective measures (such as airline and passenger ratings of service satisfaction) that can indicate whether services meet users' reasonable expectations.

The Commission did not set benchmarks for individual indicators. Each airport has different circumstances so it is not practical (or sensible) to define a benchmark for each indicator that would signal an exercise of market power at each airport. Instead, the Commission assessed indicators of airport performance over time, and relative to comparable airports in Australia and overseas, to determine whether the *indicator* could be consistent with the exercise of market power. It then assessed whether the *overall performance* of each airport in aeronautical services could be consistent with the systematic exercise of market power. The financial and operational indicators examined by the Commission are outlined in chapter 5.

Investment decisions can indicate market power, but may also reflect uncertainty

An airport operator could exercise its market power by underinvesting in infrastructure that will increase service quality or capacity. An airport operator that underinvests to *create* scarcity (or delays capacity investments to perpetuate scarcity) could charge unduly high prices or impose a rationing system to earn additional profits at the expense of broader community welfare. For example, an airport operator could delay adding new car parking spaces in order to increase car parking prices and profits. The supply of car parking at monitored airports is discussed further in chapter 6.

Airlines such as Rex and Qantas Group have argued that overinvestment in infrastructure is evidence of airport operators exercising their market power. Rex stated that regional airport operators, such as the operators of airports at Orange and Kangaroo Island, have proposed investment with a ‘build-it-and-they-will-come’ approach that does not match forecast demand (sub. 63). Qantas Group identified challenges associated with a proposed terminal expansion at ‘Airport C’, including that the airport operator was ‘building ahead of demand’ (sub. 48, p. 19).

Under the light-handed regime, an airport operator exercising its market power may underinvest to increase profits, but is unlikely to have an incentive to intentionally overinvest (chapters 5 and 6). This is because the airport operator does not need to invest to exercise its market power — it could use its market power to raise prices to earn higher profits without needing to invest in additional infrastructure.

Ultimately, investment decisions are subject to uncertainty and risk. Unforeseen changes to airport and airline circumstances mean that what initially looked like a prudent investment might have been a poor idea. For example, changes in demand that are outside an airport’s control can mean that some investments appear to be above or below requirements only with the benefit of hindsight (chapter 4). A poor investment does not mean that an airport has exercised its market power — poor investments occur in every industry and country.

Conduct in commercial negotiations can indicate the exercise of market power

The conduct of parties during commercial negotiations can also provide insight into whether airport operators have exercised their market power. The Commission has drawn on the *Aeronautical Pricing Principles* (box 2.5) to assess the conduct of parties in the negotiation process, and the commercially negotiated outcomes that parties have reached (chapter 4). A lack of good faith bargaining in the negotiation process or unreasonable sharing of risk and returns suggests that a negotiating party could be exercising its market power.

How does the exercise of market power affect the community?

An airport operator exercising its market power by charging, operating or investing inefficiently can negatively affect passengers, industry (including aviation and related industries) and the community.

The exercise of market power generates monopoly rents and reduces welfare

The additional profits earned by an airport operator exercising its market power are monopoly rents — a type of economic rent (payments above the cost of production, including opportunity costs) that has detrimental welfare effects for the community.

If an airport operator raises aeronautical charges above efficient levels, passengers are worse off due to two effects. First, passengers would typically be required to pay higher airfares (depending on the extent of airline cost pass through, discussed further below), and this reduces the total benefit received by passengers. Second, passengers who are at the margin would no longer be willing to consume the service at the higher airfare and choose not to travel altogether. This second effect is a deadweight loss — a loss of potential benefit that did not go to either the producer or the consumer. This second effect results in a poorer outcome for both producers and consumers, and therefore a loss of community welfare.

The community is also worse off if an airport operator invests or operates an airport inefficiently. Insufficient airport investment can lead to congestion and airline operators may be less likely to develop new (or existing) routes. It may mean that the infrastructure is inadequate to meet users' reasonable expectations of service availability or quality for a given price. Underinvestment in airport infrastructure can result in other costs to passengers, such as additional wait times in queues, flight delays or safety risks. Inefficient investment is detrimental to the broader community if resources invested in airports are better invested elsewhere, or at another time, to maximise industry and community benefit.

Community welfare effects depend on airport users' responses to changes in price

The extent to which an airport operator exercising its market power affects community welfare depends on the response of passengers and airlines to changes in prices for airport services, and the level of competition in downstream markets. Airport operators provide most services to airlines rather than directly to passengers (meaning that there is derived demand for airport services). For these services, the extent of any negative welfare effects depends on how passengers respond to changes in airfares (discussed further in chapter 3).

An airline's approach to setting airfares determines the extent to which it passes through an increase in airport charges to passengers. Airlines typically price discriminate to set different airfares for the same service. There are three main types of price discrimination.

- First-degree (or perfect) price discrimination occurs when a different price is charged for each unit of output, based on what the customer is willing to pay. This is unlikely to occur perfectly in practice, as a firm rarely knows the willingness to pay of each customer.
- Second-degree price discrimination occurs when a firm charges different prices to customers for different quantities consumed, such as bulk purchasing.
- Third-degree price discrimination occurs when a firm charges different prices to different segments of customers.

Price discrimination can be efficient. Segmenting prices based on customer characteristics (and therefore their willingness to pay) can increase the overall welfare of the community if it results in a larger number of customers being able to purchase their preferred good or service.

Airlines price discriminate, for example, through advance bookings, as well as flight dates and times. They can dynamically change airfares for a particular flight depending on demand for different airfare categories over time. Airlines can also use product differentiation to segment different customer types, and do so by selling different airfare types and classes.

Airline pricing strategies that shield the more price sensitive passengers in order to limit the change in passenger numbers can reduce the negative welfare effects of an increase in aeronautical charges. However, use of price discrimination can also reduce the total benefit to consumers if the airline can more precisely target airfares to a consumer's willingness to pay. Airlines' use of analytics to set airfares has enabled a move toward first-degree price discrimination.

The extent to which airlines pass costs through to passengers can also depend on the concentration of the downstream airline market (chapter 3). The prices paid by end-user passengers typically increase by less than the increase in the upstream charge, meaning that airlines pass through some (but not all) of an increase in aeronautical charges to passengers through airfares. The extent of pass through depends on the interplay between airline and passenger responsiveness to price changes — a highly concentrated airline market can still result in significant cost pass through if passenger demand is highly sensitive to changes in price (Forsyth, sub. DR159).

Sometimes a downstream market may lack effective competition, restricting the flow of benefits to the community. This should not prevent policy reform efforts to improve competition in the upstream market. In the short term, improvements in upstream competition may largely result in a transfer of rents to the downstream market, rather than better outcomes for consumers. Over time, new entrants — or the threat of new entrants — in the downstream market may improve conditions for competition leading to better outcomes for consumers in the long term.

2.3 A fit-for-purpose regulatory regime

Regulation is a policy tool available to governments to improve the welfare of the society as a whole. It allows governments to correct for market failures, such as a lack of competition, externalities or information asymmetries. It can also target specific equity goals. The goal of economic regulation should not be competition in and of itself — rather, the goal should be better outcomes for consumers. Economic regulatory regimes have several elements. They typically establish:

- institutional arrangements, such as the role of government institutions, including regulators, or any relevant legislative instruments
- how a price for the good or service is determined
- requirements for information collection, analysis and publication

-
- a constraint on parties' behaviour (such as a price or revenue cap) or credible threat of consequences (such as a move to implement additional regulation).

However, regulation has costs. In particular, there is potential for regulation to distort firms' incentives for investment, innovation or efficiency improvements. Regulation can result in:

- regulatory error — costs that arise due to inherent uncertainties faced by regulators, as they are required to make decisions with imperfect information about changes in the market and how the affected parties would respond
- compliance costs — direct costs incurred by firms in complying with the regulatory arrangements. Under the current airport monitoring arrangements, airports incur costs associated with submitting financial reports to the ACCC and administering surveys on service quality
- administration and enforcement costs — costs incurred by the regulator for compliance with regulation, such as the costs for the ACCC to administer the monitoring regime for airports
- implementation and transition costs — costs associated with implementation of and transition to different regulatory arrangements. These costs can present risks to the achievement of policy objectives, despite well-designed regulation.

Regulation should achieve its intended objectives

A fit-for-purpose regulatory regime that is well designed and implemented should enable the Government to achieve its objectives. In accordance with the Australian Government's stated objectives, a fit-for-purpose economic regulatory regime for airports should benefit the community by promoting efficient airport operations and investment, facilitating commercial outcomes and minimising unnecessary compliance costs.

Where governments decide to intervene, the design and implementation of the policy is critical to its success. The design of a regulatory regime depends on the nature of the market, the good or service in question and the policy objective of government. For example, in some regulatory regimes, a regulator directly sets prices (or total allowable revenue) based on the data it has collected from firms, with options for recourse in legislative provisions if a firm does not comply.

The light-handed approach to the economic regulation of airports is intended to achieve outcomes that would be consistent with those found in markets with effective competition, but will only do so if there is both:

- transparency as to how an airport operator is performing over time, to enable an assessment of whether it is likely to be exercising its market power
- a credible threat of additional regulation if an airport operator is found to be exercising its market power to the detriment of the community.

A fit-for-purpose regulatory regime should also ensure consistency with broader government objectives. For example, Sydney Airport’s regional ring fence, and price cap and notification regime aim to support access for airlines operating flights between Sydney Airport and regional New South Wales.

The design of any regulation involves trade-offs — changing the features of the regulation to achieve one objective can risk the achievement of another. Changes to the current regulatory regime are explored in chapter 9.

The monitoring regime should support the Government’s objectives

Central to the light-handed approach to the economic regulation of airports is the monitoring regime, which requires airports with market power to provide annual information on their prices, costs and profits for aeronautical services and car parking (chapter 1). Monitoring is a policy approach that can affect airports’ pricing decisions through moral suasion, transparency of airports’ financial and operational performance, and the explicit or implicit threat of stricter forms of regulation. Monitoring seeks to support commercial relationships and lower the risk of regulatory error and consequent distortions in production and investment. When recommending this approach in 2002, the Commission concluded that ‘... monitoring can be a less explicit or intrusive method for influencing prices than price caps or cost-based regulation, though it may have similar effects on pricing and costs’ (PC 2002, p. 315).

Whether the monitoring regime supports the Government’s objectives depends on its features, including the:

- relevant indicators — data and information can be analysed to understand the drivers of airport costs, revenues, and profitability, and used to identify whether an airport is exercising its market power to the detriment of the community
- timeliness of data collection, analysis and publication — the frequency of collection and publication of data and information supports timely government, consumer and industry decision making
- scope of services subject to monitoring — the scope of services covered by the regime is sufficient to identify potential problems in the areas of concern.

Monitoring can provide performance information to assess whether an airport operator has exercised its market power to the detriment of the community. The monitoring regime should target the scope of services where the potential exercise of market power is a concern. The monitoring regime has compliance costs for both government and monitored firms, and the cost of monitoring should be proportional to the intended objective — to promote the economically efficient operation of airports.

Assessing the case for policy reform

The test for any policy change is whether it would generate the greatest increase in the welfare of the Australian community compared with other options, including the status quo.

Any regulatory change should also take into account the broader regulatory landscape. A general principle of regulatory design is to avoid additional regulation where governments could address the issue using existing mechanisms, in order to minimise the overall costs of regulation to the community. Part of the broader regulatory landscape for the regulation of airports includes mechanisms to promote competition and provide market power protections, such as the National Access Regime under Part IIIA of the *Competition and Consumer Act 2010* (Cwlth) (chapter 1). Participants have different views on the extent to which existing regulatory mechanisms are fit for purpose for airport regulation. The Commission has taken into account other available regulatory mechanisms when weighing up the merits of any change to the regulatory regime for airports.

Policy change should lead to greater net benefits for the community

The Commission assessed whether airport operators have exercised their market power to the detriment of the community. This assessment considered the constraints an airport operator faces, including the countervailing power of airlines, which limits an operator's ability to exercise its market power (chapter 3). This approach is consistent with the views put forward by the National Competition Council, which noted that a detailed assessment to demonstrate a clear market failure is necessary before introducing heavier-handed regulation, given the potential risk of regulatory error (NCC, sub. 79, sub. DR156).

Some inquiry participants have proposed alternative approaches. The ACCC, for example, considered that the existence of market power was a rationale for additional economic regulation, and that an unconstrained monopoly with market power will use that power.

The major airports exhibit strong natural monopoly characteristics and therefore face very little competition in the supply of aeronautical services. As recognised by the Productivity Commission, this provides them with strong market power. Based on the ACCC's experience from its regulation across the infrastructure sector, unconstrained monopolies that possess market power will use that power.

... The current airport monitoring framework consists of ACCC monitoring, periodic reviews by the Productivity Commission and possible declaration under the National Access Regime. While this framework may have constrained airport behaviour in the past because of the threat of regulation, there are good reasons to consider that it is no longer posing the same threat to airports today, and will be less credible as a threat in future.

Based on its experience, the ACCC does not believe that monitoring alone can constrain monopolies from using their market power to the detriment of consumers. (sub. DR158, p. 2)

Governments should only make changes to regulation to address airports' market power if those airports are systematically exercising this power, and changes to the regime are likely

to lead to net benefits to the community. The mere fact that an airport has market power is insufficient to justify a change to the regulatory regime. Forsyth, for example, noted that ‘... even if [airport] returns were moderately excessive, if the system has increased efficiency, compared to other options such as price-caps, the system would be performing well’ (Forsyth, sub. DR159, p. 1). Intervention to address market power where airport operators are unable to exercise that power will likely lead to net costs for the community.

Policy implementation should be clear, well-defined, and provide certainty

Transitioning to any new regulatory arrangements can result in adjustment costs and other risks associated with implementation. Well-defined institutional arrangements are critical to the successful implementation of policy changes. Governments should clearly articulate changes to roles and responsibilities, laws, regulations and operating procedures. This supports clarity for regulators and regulated entities and assists parties to achieve the intended regulatory objectives and outcomes.

In designing any policy change, governments should develop a clear transition path, with the benefits of reform to be realised in a timely manner. For example, transition may introduce uncertainty that can reduce investor confidence. A clear statement of objectives and announcement of the reform transition path may provide certainty for investors. The Commission’s recommendations to change the regulatory regime include consideration of both institutional arrangements and timeframes for implementation (chapter 10).

Governments should ensure that any policies or regulation and its objectives remain fit for purpose over time. Regulation that initially produces net benefits for the community may not at some future time, given changes can occur in markets and technologies, or in people’s preferences and attitudes. Regular monitoring and review can assess whether reforms are having their intended effects and are continuing to deliver net benefits. Any assessment of regulatory reform should consider, for example, a relevant timeframe for monitoring and review, the potential compliance burden and the institutional roles required to support the reform process. Regular review check-ups can ensure that the regulatory regime adjusts to changing conditions in the industry and remains fit for purpose, as what has worked in the past may not continue to work in the future.

3 Airports' market power

Key points

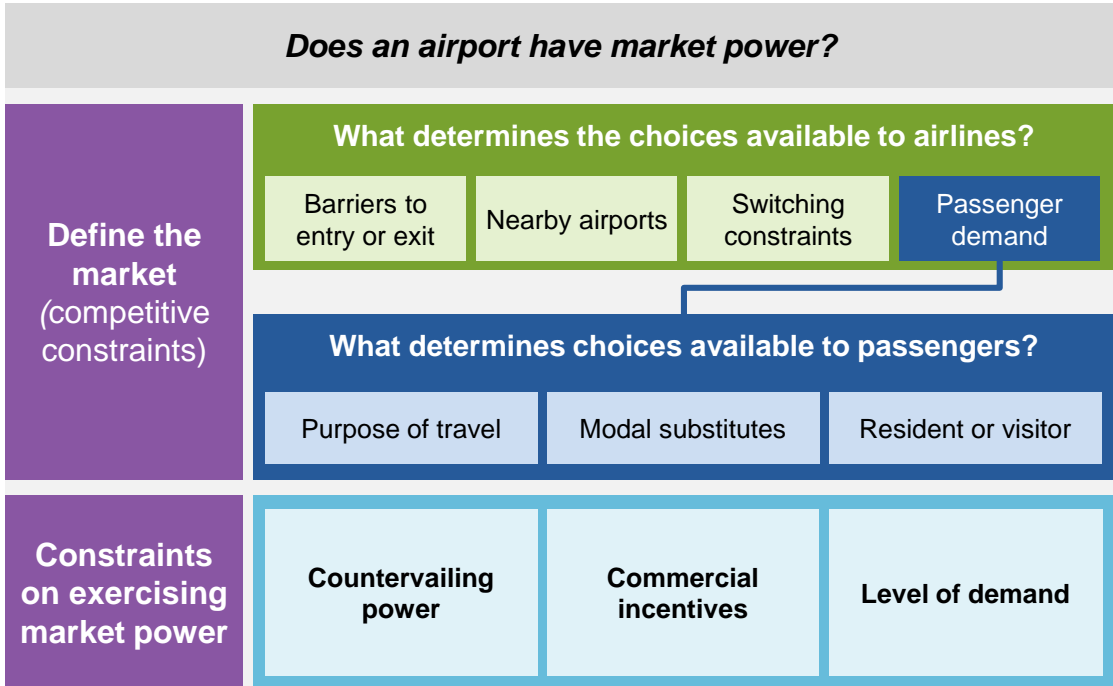
- An airport operator with market power could use that power to set unduly high prices, or lower their service quality below users' reasonable expectations, to increase its profits.
- The competitive constraints faced by an airport operator are determined by the characteristics of its operating environment. Relevant characteristics include barriers to entry or exit, competition from nearby airports, opportunities for airlines to switch to another airport, and the nature of passenger demand for air travel, including alternative modes of transport.
- Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) have significant market power in domestic and international aeronautical services. There is a *prima facie* case for regulatory intervention.
 - There are high barriers to new market entrants, including upfront capital costs, the availability of suitable land and regulatory requirements.
 - Sydney, Melbourne and Perth airports face little competition from nearby airports. Brisbane Airport faces competition from Gold Coast and Sunshine Coast airports for some domestic aeronautical services.
 - The monitored airports, especially Sydney and to a lesser extent Melbourne, are gateways to cities that are business and tourism hubs.
- Even if an airport has market power, it is not always able, or incentivised, to use it. Constraints on an airport's exercise of market power include countervailing power, airline bargaining power more broadly, and the level of demand for airport services.
 - Qantas Group, Regional Express and Virgin Australia Group are each likely to have some ability to constrain the behaviour of airport operators.
- None of the airports that currently participate in the second-tier voluntary monitoring regime have significant market power.
 - Although Canberra Airport has a high proportion of non-leisure passengers, there is some scope for modal substitution. There is good availability of road transport alternatives for the Canberra–Sydney route, which accounts for one third of passenger movements at Canberra Airport.
 - There is limited scope for modal substitution for passengers travelling to or from Adelaide, Cairns, Darwin, Gold Coast and Hobart airports but their market power is constrained because they have a relatively high proportion of leisure passengers who are responsive to changes in price.
- Profitable regional airports face constraints on the exercise of market power, such as relatively lower barriers to entry for small-scale private airports that support construction and extraction activities in the resources sector, the countervailing power of airlines, and competition from other airports in tourism destinations.
- Regional airports that run at a loss do not have market power as their costs are higher than what users are willing to pay.

An enduring lack of effective competition in markets for airport services can give rise to an airport operator having market power. Operators could exercise their market power to increase their profits by, for example, setting unduly high charges, or lowering the service quality or quantity for the same prices paid (chapter 2).

The Commission used an approach developed by King (2001) to determine which airports have market power in the provision of domestic and international aeronautical services, and whether they face constraints on exercising that market power (figure 3.1). The Commission has used the same approach to assess whether airports have market power in car parking and landside access (chapter 6). Market power in the supply of jet fuel is considered in chapter 8.

This chapter concludes that only the four major airport operators — Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) — have significant market power, creating a *prima facie* case for regulatory intervention (chapter 2). Subsequent chapters assess whether airport operators are *exercising* their market power to the detriment of the community when negotiating with users of airport services (chapter 4), in the provision of aeronautical services (chapter 5) and in the provision of car parking and landside access (chapter 6).

Figure 3.1 Assessing market power in aeronautical services



3.1 Assessing whether an airport has market power

An airport with market power is able to increase the prices or reduce the quality of its services without losing too much business. There are two main steps in the analytical approach set out by King (2001) to determine whether an airport has market power.

The first step is to define the market in question and, in doing so, to consider what constraints, if any, are imposed by competition. This involves an assessment of how demand for a service would change in response to a price increase for the relevant service, referred to as the price elasticity of demand (box 3.1).

The second step is to consider constraints on the *exercise* of market power that may exist in addition to, or apart from, constraints that arise from competition in the market. Such constraints could include whether airlines (or other users of airport services) are able to exert pressure in the form of countervailing power or whether there are commercial or other incentives that might prevent an airport operator from raising prices above the efficient long-run average cost. Long-run average cost is the Commission's preferred conceptual benchmark for assessing whether the pricing of infrastructure services is efficient (chapter 2).

Box 3.1 Elasticity of demand in airport services

Price elasticity of demand

Price elasticity of demand is a measure of the responsiveness (elasticity) of demand for a good or service to a change in its price, all else held equal. It is defined as the percentage change in quantity demanded for a one per cent change in price.

If, at an efficient price, a firm faces a demand curve with a price elasticity of demand greater than one then a rise in price will lead to a significant loss of business. Such a firm is likely to have substantial market power. In contrast, if demand is inelastic (with a price elasticity of less than one) then a firm can raise its price and increase both revenue and profit.

Demand elasticity for air transport typically varies with the purpose of a passenger's travel. Gillen, Morrison and Stewart (2007) found that business travellers have the most inelastic demand, with an elasticity of 0.7, indicating that a one per cent increase in ticket prices will lead to a 0.7 per cent fall in demand. Leisure travellers are more responsive to price changes, with an elasticity of 1.5, meaning that a one per cent increase in the price of a ticket will lead to a 1.5 per cent fall in demand by leisure travellers.

(continued next page)

Box 3.1 (continued)

Elasticity of derived demand

Passenger demand for air travel drives an airline's demand for airport services. An airline's response to a change in aeronautical charges (its price elasticity of demand for aeronautical services) is muted, because aeronautical charges are only one component of the final ticket price. Major determinants of the price elasticity of an airline's demand for aeronautical services are:

- elasticity of passenger demand
- charges for aeronautical services as a proportion of the total ticket price.

Airlines operating in a competitive market for air transport would pass through in full a change in aeronautical charges to passengers. When the downstream market is competitive, the percentage change in the final ticket price would be proportional to the percentage of the ticket price comprised by the aeronautical charges. For example, a 10 per cent increase in aeronautical charges from \$10 to \$11 would increase a \$100 fare by \$1, or one per cent. Based on Gillen, Morrison and Stewart (2007), a one per cent average increase in aeronautical charges would lead to a fall in demand from a business passenger of around 0.07 per cent, and a fall in demand from a leisure passenger of about 0.15 per cent.

The higher the proportion of aeronautical charges to the total price of a ticket, the closer the link between passenger elasticity of demand for air transport and for airport services.

In practice, airlines have the ability to price discriminate (charge different passengers different prices for essentially the same service), so the relationship between aeronautical charges and the final ticket price is not direct. Price discrimination can lead to ticket prices that are closer to the value that consumers place on them — and so can be efficient — but also means that airlines will not necessarily pass through any reduction in aeronautical charges (chapter 9).

Sources: A4ANZ (sub. 44); Gillen, Morrison and Stewart (2007); Pindyck and Rubinfeld (2015).

Considerations for market definition

Markets for aeronautical services are defined by the availability of alternative services for both airlines and passengers (figure 3.1). If an airline switches some or all of its services from one airport to another in response to a small but significant ongoing increase in aeronautical charges, then the airports compete with each other for airline demand and they are in the same market. If an airline does not switch at least some of its services to an alternative airport, the airports are in different markets.

Defining a market requires consideration of several factors.

- The service in question and who consumes or supplies it — do airlines and passengers have the ability to choose alternative suppliers or products if charges or airfares change? This depends on the scope for an alternative airport or new entrant that could provide the same service, and potential alternative services for airlines and passengers (for example, alternative routes or modal substitutes). The catchment area of a service influences the geographic boundaries of the market, while the ability to substitute to other products influences product boundaries.

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- The integrated nature of a service — what bundle of services should be assessed? Aeronautical services include runways, lighting, aerobridges or buses, and terminal access, but the exact bundle depends on whether the customer is an international or a domestic airline, or a low-cost carrier (LCC) or full-service carrier. In practice, it is not feasible (or necessarily useful) to consider airport market power at the individual service level.
 - The timeframe for analysis — over what timeframe do suppliers and consumers adjust to an increase in aeronautical charges? Substitution possibilities for airport services are often limited in the short term, but if a long time is required for consumers and/or suppliers to respond, then that in itself might contribute to the level of an airport’s market power.

3.2 Defining markets for aeronautical services

What determines the choices available to airlines?

The degree to which airlines have alternative ways of meeting their demand for aeronautical services is one driver of the competitive constraints on an airport (A4ANZ, sub. 44). Barriers to market entry or exit, nearby airports, switching constraints and passenger demand all influence whether an airline can switch to another airport.

Barriers to market entry or exit

Market entry, or the potential for entry of new competitors, is a precondition for workable competition. If an incumbent firm sets charges at a level that leads to excessive profits or offers a low quality of service, rival firms have an incentive to enter the market, undercut prices and/or offer a better service and make an economic profit. This would result in customers moving from the incumbent to the rival firm. High barriers to entry and exit — as is often the case with airports — can limit this response. As noted by Frontier Economics in the Airlines for Australia and New Zealand (A4ANZ) submission, ‘in the short-term, incumbent airports have reasonable certainty that a rival airport cannot enter or expand capacity’ (sub. 44, appendix A, p. 20).

The main barriers to entry for airports are the large, indivisible investments required to develop airport infrastructure, such as terminals and runways (chapter 2), the availability of suitable land and regulatory requirements. Western Sydney Airport is an example of the cost, and the time required, to develop an airport site. The Australian Government has committed up to \$5.3 billion over the next ten years to develop Western Sydney Airport, in addition to the earlier investment made to acquire the land (DITCRD 2018). The 1700 hectare site was acquired between 1986 and 1991 as a location for a second international airport for Sydney, more than thirty years before it will be used.

Regulatory requirements, such as noise restrictions, airport-specific building regulation, and environmental regulation can present barriers to entry by slowing or constraining the design and construction phases of a new airport. Border security requirements can also inhibit the

expansion of existing airports into international markets. Hobart Airport (sub. 31, p. 2) argued that international border security requirements ‘effectively constitute a barrier to entry for [those] domestic airports, such as HBA [Hobart Airport], seeking to introduce international flights’. (The Australian Government announced in February 2019 that it would invest about \$82 million for border services, such as customs, immigration and biosecurity, to support Hobart Airport’s expansion of international aeronautical services (Australian Government and Tasmanian Government 2019).)

The Australian Airports Association (AAA) acknowledged that opening a new airport ‘is not like opening a new coffee shop’, although it argued that entry into the market is possible:

As the Badgerys Creek development has demonstrated, there can be significant legal, planning and development barriers to entry. However, the development of the Toowoomba (Wellcamp) Airport and numerous other private developments to support resources construction and extraction activities demonstrate that entry into the market may be easier in regional contexts where the scale of entry is relatively modest. (sub. 50, p. 68)

In 2014, Toowoomba Wellcamp Airport became Australia’s first new major airport in over four decades. It was built in less than two years and cost just under \$200 million (Wagners 2014). Toowoomba Wellcamp has an estimated catchment of 350 000 people and capacity for 1.4 million passengers per year, and it served about 140 000 passengers in 2017-18 (BITRE 2018a; Wagners 2014). It takes about 20 minutes to travel to Toowoomba Wellcamp Airport from the Toowoomba CBD (which is about 15 km away) and just under two hours from Brisbane (about 150 km away). However, Toowoomba Wellcamp Airport is unlikely to be a significant competitive constraint on Brisbane Airport in the foreseeable future. More generally, it is unlikely that a new regional airport would introduce strong competition to the monitored airports.

Nearby airports

Australia’s size and relatively small population can create geographic monopolies in which an airport captures the entire market in an area. Airlines operating at airports that are geographic monopolies cannot easily respond to an increase in aeronautical charges by switching to a nearby airport. This is a characteristic of an airport with market power.

Of the monitored airports, Perth and Sydney airports (noting Western Sydney Airport is not scheduled to commence operation until 2026) are geographic monopolies in most of the domestic markets in which they operate. Perth, an isolated population centre, has an effective geographic monopoly over interstate and international air transport, although it faces competition from other Australian and international airports for visiting leisure passengers. Sydney Airport faces limited competition for some domestic services due to modal substitutes and from other international airports for international services, but does not face significant competition from airports operating in the same catchment. Melbourne Airport (sub. 33) and Brisbane Airport (sub. 38) told the Commission that they face direct competition from nearby airports for domestic aeronautical services (discussed below).

Many regional airports offering regular public transport (RPT) services are geographic monopolies, but this is not always the case. People living in some regional and remote locations have a choice between airports. For example, someone wishing to travel to or from the Central West of New South Wales may be able to choose between Dubbo, Parkes and Orange airports. Island airports and those in very remote locations are usually geographic monopolies.

Melbourne Airport faces little competition from Avalon Airport

Melbourne Airport commented that it faced direct competition because airlines can choose to switch to the nearby Avalon Airport:

With the investment in new facilities at Avalon Airport, the degree of competition it will bring as a second airport for Melbourne could be expected to increase over time. Demonstrated particularly by the move of AirAsia to Avalon, it does provide a real alternative for airlines to service the Melbourne market. (sub. 33, p. 56)

Melbourne Airport competes with Avalon Airport for some services. About 60 per cent of domestic passenger movements at Melbourne Airport in 2017 were on routes also served by Avalon Airport; mainly the Melbourne–Sydney route (Commission estimates based on BITRE (unpublished)). In theory, these passengers could have chosen to fly from Avalon Airport.

Avalon Airport’s new international facilities have so far led to only one international route being provided by AirAsia (Melbourne–Kuala Lumpur), although there is the potential for competition on other routes in the future.

In practice, Avalon Airport offers significantly less variety and fewer services than Melbourne Airport and, for most passengers, the time cost of travelling to Avalon is greater than to Melbourne Airport. In addition, passengers who fly from Avalon do not have a choice of airlines because Jetstar, an LCC, is currently the only domestic airline operating out of the airport and AirAsia is the only international airline (and, as noted above, it currently offers services on only one international route).

Avalon Airport serves a very small number of passengers compared to Melbourne Airport, and there would have to be substantial switching for it to provide a competitive constraint to Melbourne Airport. This has not occurred to date in domestic services. At its current level of operations, Avalon Airport does not constitute a competitive constraint on Melbourne Airport, although that may change in the future.

Queensland airports compete for some domestic services

Brisbane Airport (sub. 38, p. 21) told the Commission that it ‘operates in a highly competitive environment, with three international airports — Gold Coast, Sunshine Coast and Toowoomba Wellcamp — within a two hour drive of Brisbane’ (box 3.2). Gold Coast

Airport described the south-east Queensland and northern NSW market as ‘undoubtedly the most competitive area in the country when it comes to aviation’ (QAL, sub. 23, p. 7).

Commission analysis of domestic route availability in 2017 indicates that the Brisbane, Gold Coast and Sunshine Coast airports offered flights to many of the same destinations. About 90 per cent of passenger movements at Brisbane Airport could theoretically have been serviced using Sunshine Coast or Gold Coast airports, given the routes passengers travelled. More than half of total passenger movements at Brisbane Airport were along either the Brisbane–Melbourne route or the Brisbane–Sydney route (Commission estimates based on BITRE (unpublished)). On these routes, passengers could have chosen to use either Gold Coast or Sunshine Coast airports.

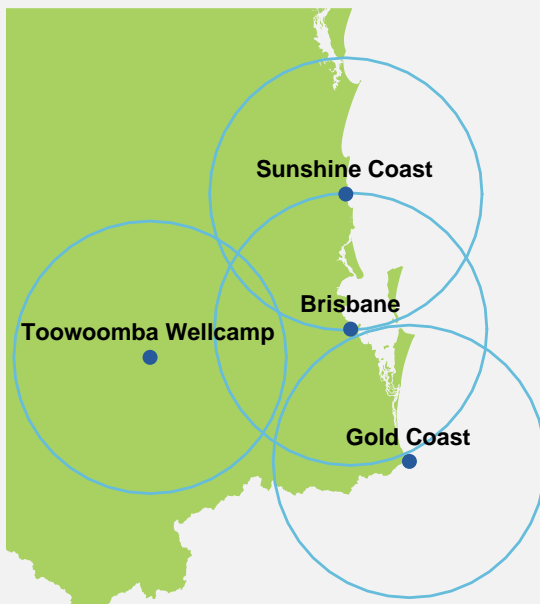
Passengers also have a large choice of airlines. Qantas, Jetstar and Virgin Australia Airlines (Virgin) all fly to Brisbane, Gold Coast and Sunshine Coast airports, and each airport has significant passenger throughput (box 3.2). This indicates that, for a significant proportion of airlines and passengers, Gold Coast and Sunshine Coast airports are potential alternatives to Brisbane Airport.

Passengers travelling on lower volume routes had less choice. About six per cent of passengers had no alternative to Brisbane Airport. Gold Coast and Sunshine Coast airports only serviced routes that were also serviced by Brisbane Airport (Commission estimates based on BITRE (unpublished)). This implies that Brisbane Airport is a stronger competitive constraint on Gold Coast and Sunshine Coast airports than the reverse.

In practice, these Queensland airports are not perfect substitutes. Passengers usually have a strong preference to use the airport closest to them, even when there are substitutes within a reasonable distance. A4ANZ quoted modelling by Frontier Economics Europe, which showed that for every one per cent increase in distance to an airport (measured by the estimated drive time to an airport), the likelihood of a passenger choosing to depart from that airport declined by four per cent, on average (A4ANZ, sub. 44, appendix A). A 2018 survey by Avalon Airport had similar findings — three quarters of Avalon Airport passengers lived within 30 km of the airport (Avalon Airport (unpublished)).

Other factors, including flight schedules and airport facilities, influence consumer preferences and substitution possibilities. In general, Brisbane Airport offers more choice of flight times than the other airports and has a higher proportion of business passengers. These factors tend to increase Brisbane Airport’s market power, relative to Sunshine Coast and Gold Coast airports.

Box 3.2 Queensland airports face (some) competition^a



The south east region of Queensland is serviced by four airports, the largest of which is Brisbane Airport. Sunshine Coast and Gold Coast airports are both located within 100 km of Brisbane Airport, while Toowoomba Wellcamp Airport is about 150 km west of Brisbane Airport.

Brisbane is Australia's third largest city, with about 2.2 million residents providing a steady supply of passengers travelling for business and leisure. The region is a popular tourism destination, with Tourism Research Australia reporting just over 20 million visitors to Brisbane in 2017-18, including those coming for the day, overnight and from overseas.

The Gold Coast is a popular destination for both domestic and international visitors, with about 11 million visitors in 2017-18 — about half as many as Brisbane. The resident population of Gold Coast is about 660 000 — less than one third of Brisbane's population.

The Sunshine Coast has a resident population of about 311 000 (about one seventh the size of Brisbane) and had about 6.5 million visitors in 2017-18.

Toowoomba Wellcamp Airport is located about 15 km from the city of Toowoomba. The resident population is about 166 000 and there is about 2.6 million visitors annually.

^a The figure depicts a radius of 100 km around each airport.

Sources: ABS (*Regional Population Growth, Australia, 2016-17*, Cat. no. 6203.0); Tourism Research Australia (2018b).

Switching constraints

An airport has less market power if an airline can respond to an increase in aeronautical charges by switching operations to a different airport. An airline's ability to switch depends on many things.

- Passengers' purpose of travel — an airline will be less likely to switch away from a route that has a passenger base that is inflexible, such as a high proportion of passengers travelling for business purposes. These passengers are less responsive than leisure travellers to an increase in airfares.
- Operational constraints — capacity and service quality differences between airports might restrict the ability of an airline to switch to an alternative airport.

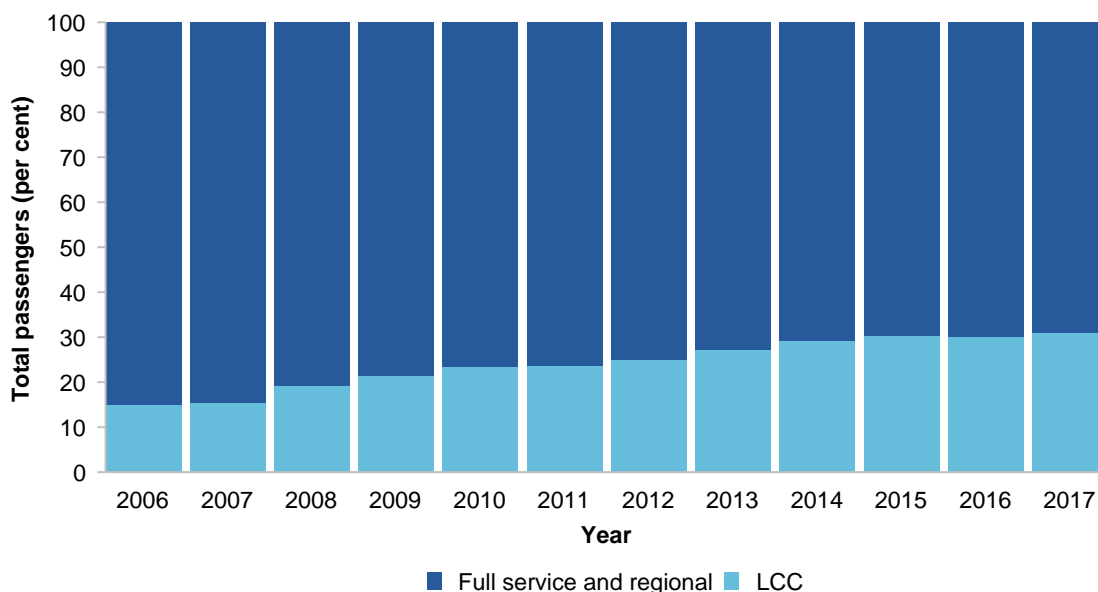
- Network reach — airlines commented that they would face significant brand damage and be at a competitive disadvantage if they switched away from existing routes (A4ANZ, sub. 44; Qantas Group, sub. 48; Virgin Australia Group, sub. 54).
- Switching costs — the costs associated with relocating equipment or staff, changing or breaking contracts, and marketing the new location (A4ANZ, sub. 44, appendix A).

Low-cost carriers can change routes more easily than full service carriers

The proportion of passengers using LCCs in Australia (Jetstar and Tigerair) for domestic travel has more than doubled from about 15 per cent in 2006 to over 30 per cent of domestic passengers in 2017 (figure 3.2).

Figure 3.2 Low-cost carriers are increasing their share of the aviation market

Domestic passenger shares, by carrier type



Source: Commission estimates based on BITRE (2018a).

LCCs have lower overheads than full-service airlines. Some analysts and inquiry participants have stated that they are able to change routes relatively quickly (Bush and Starkie 2014; Button 2016). LCC business models rely more on low prices and less on network coverage than full-service carriers. Lower average ticket prices mean that aeronautical charges make up a higher proportion of the overall ticket price (Qantas Group, sub. 48). Passengers of LCCs are generally price sensitive, increasing the incentive for an airline to change routes if an airport increases its charges.

Some airport participants to this inquiry, including Northern Territory Airports (sub. 8), noted the ability of LCCs to withdraw services. North Queensland Airports commented on the ability for LCCs to respond to changes in demand, providing an example of LCCs pulling out of Mackay (a town affected by structural changes in the sugar and resource industries (PC 2017b)):

Growth in passengers has been from low cost carriers (LCCs) whose business models are optimised to re deploy capacity to profit maximising routes. At Mackay in the face of declining demand airlines simply scaled back services, and/or withdrew completely (sub. 49, p. 5).

A4ANZ (sub. DR106) argued that in the draft report the Commission, by implying that LCCs can change routes, ignored the effects switching would have on an airline's network operations and connectivity, and investment in infrastructure. The Commission acknowledges that network connectivity and investment can be barriers to switching, but still considers these barriers to be lower for LCCs than full-service carriers.

A higher proportion of domestic passengers carried by LCCs can increase competition between airports, given LCCs are more likely than full-service carriers to switch between airports. Further, airports with a high proportion of passenger movements using LCCs are likely to have less market power because those airlines are likely to be more sensitive to changes in aeronautical charges. Airports with more than 50 per cent of passenger movements on LCCs in 2017 included Avalon (100 per cent), Ballina (78 per cent), Proserpine (75 per cent), Newcastle (66 per cent), Sunshine Coast (66 per cent), Gold Coast (61 per cent), Launceston (57 per cent) and Hobart (53 per cent) (BITRE unpublished).

Airports face more competition in international services

Airlines operating international services have greater capacity to substitute from one airport to another compared with those offering domestic services. This is partly because a higher proportion of international passengers are travelling for leisure purposes and have the ability to substitute to an alternative destination (ABS 2018b). Just over one quarter of Australian domestic air travel in 2017-18 was for leisure purposes (TRA 2018b), whereas almost half of short-term international visitors to Australia came for leisure purposes. A further 30 per cent visited friends and relatives, 20 per cent visited for business purposes (which includes visits for conferences, education and employment), and 3 per cent visited for 'other' reasons (including reasons 'not stated') (ABS 2018b).

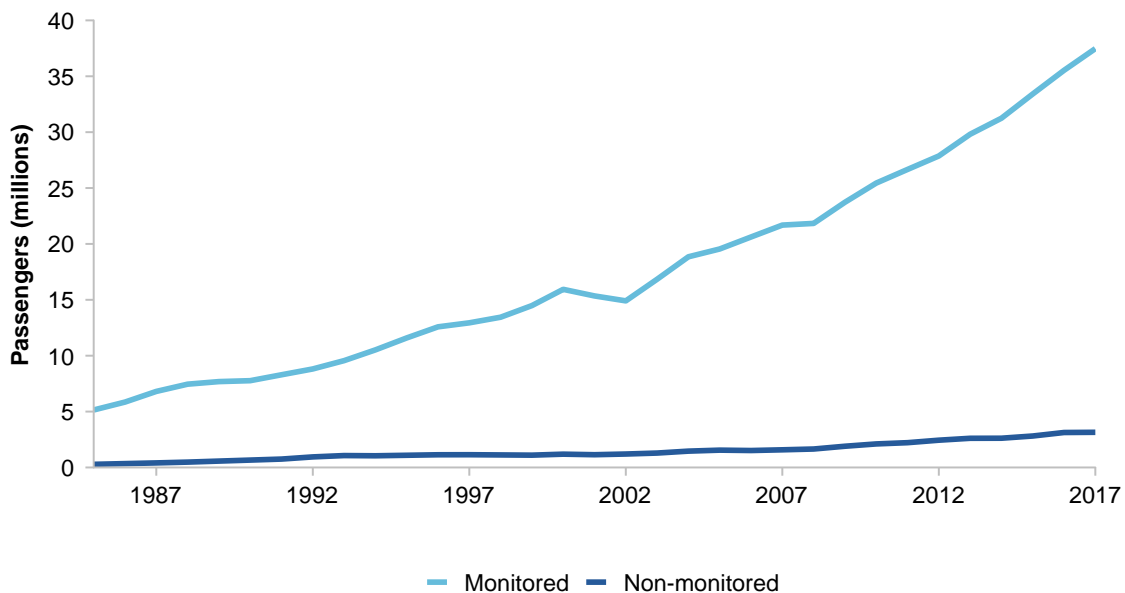
Like domestic LCCs, some international airlines do not base their service offering on network coverage, giving them more freedom to substitute away from less profitable routes. International airlines can, and do, substitute in and out of smaller capital city airports. Northern Territory Airports stated that international airlines frequently entered and exited

the market, creating uncertainty and increasing the risk associated with fluctuating passenger numbers for the airport:

Entry and exit of international carriers is a feature with 1 international carrier (Donghai) entering the Darwin market in the last 12 months and 3 (Malaysia, Philippine and Indonesia Air Asia) exiting in the same period. (sub. 8, p. 2)

International airlines are more likely to switch between the smaller international airports. The smaller international airports have experienced much lower growth in international passenger numbers than Sydney, Melbourne, Brisbane and Perth airports (figure 3.3).

Figure 3.3 International passenger growth at monitored airports has been higher than at non-monitored international airports



Source: Commission estimates based on BITRE (2018a).

The monitored airports face a lower threat of airlines substituting away from their international services than other airports because monitored airports are gateways to differentiated products — destinations with unique characteristics that are important to passengers and, consequently, airlines. Airports that are not gateways compete with each other and with airports around the world to attract airlines, but the monitored airports (especially Sydney and Melbourne) face considerably less competition due to the absence of good substitutes.

The monitored airports commented that the higher growth in international passengers was a result of their efforts to attract airlines. For example, Melbourne Airport (sub. 33) reported that it works with tourism bodies and the Victorian and local governments to help attract international airlines to the region, including with competitive offers and incentive schemes.

Although airports stated that they have to work hard to attract new airlines and open up new routes, the passenger demand response to an increase in international aeronautical charges is generally lower than it would be for the same (absolute) increase in the charge for domestic aeronautical services. This is because aeronautical charges generally comprise a significantly lower proportion of the final ticket price for international flights.

This implies that where there are no good substitutes available, airports could exercise market power by raising aeronautical charges to an excessively high level without a strong demand response from passengers and airlines.

What determines the choices available to passengers?

Passenger demand for air travel drives airlines' demand for airport services. The availability of alternatives to air travel is one competitive constraint on airports (A4ANZ, sub. 44). Every passenger's situation is different, but the availability of alternatives generally depends on purpose of travel, modal substitutes, and whether a passenger lives in the catchment area of the relevant airport or is a visitor to the region.

Purpose of travel

The purpose of travel affects passengers' price sensitivity, their flexibility with respect to travel time and, in some cases, their destination (Gillen, Morrison and Stewart 2007).

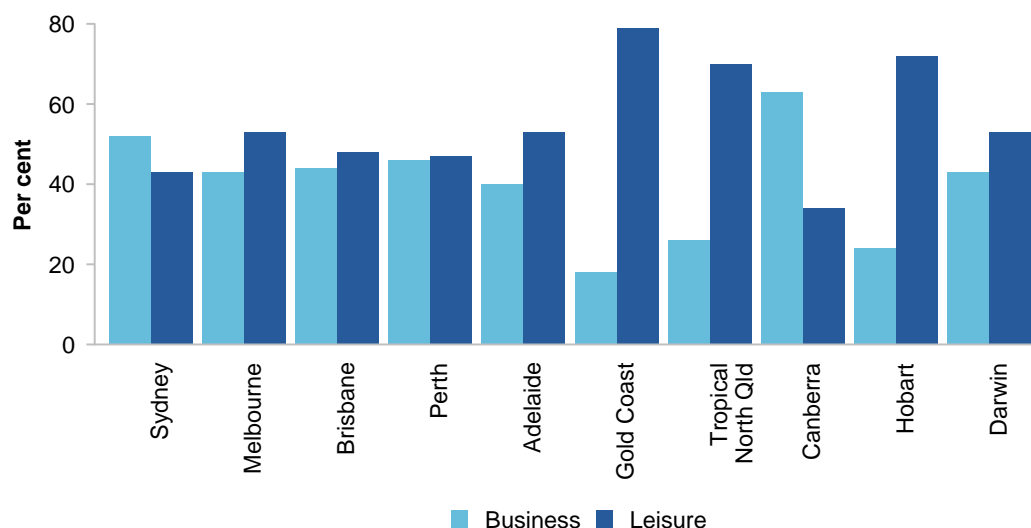
- Passengers travelling for business have *little flexibility* over their final destination and travel schedule and are relatively *insensitive to price changes* (inelastic demand).
- Passengers visiting friends or relatives have *little flexibility* over their final destination, but may have some flexibility over flight times, airline and total travel time. They are generally *more price sensitive* than business passengers (more elastic demand).
- Passengers travelling for leisure are generally the *most flexible* as to when and where they travel, and are the *most price sensitive* (most elastic demand).

There is limited data on the variation between airports with respect to the proportion of passengers travelling for business and for leisure. The Commission drew on 2017 survey data from Tourism Research Australia outlining overnight domestic visitors' purpose of travel to a region, where the main mode of transport was air (figure 3.4). The data are likely to be broadly representative of passengers' purpose for travel at the airport operating in that region, but are not a precise measurement at the point of the airport. The data likely underestimate the percentage of business passengers (many domestic business travellers make day, rather than overnight, trips) and do not account for passengers who travelled to a nearby city and then used an alternative form of transport for the final leg of their journey.

The monitored airports and Canberra Airport have a high proportion of business passengers. The lack of flexibility and price insensitivity of business travellers increases the scope for market power in domestic aeronautical services at these airports.

Figure 3.4 The share of business and leisure passengers varies across airports

Overnight domestic visitors: purpose of travel, by airport, 2017^a



^a Overnight domestic visitors whose main mode of transport was plane, by selected regions and ordered by number of passenger movements. Visiting friends and relatives and 'other' categories not included.

Source: Commission estimates based on TRA (unpublished).

Some airports including Cairns (Tropical North Queensland in figure 3.4), Gold Coast and Hobart, had a high proportion of leisure passengers relative to the monitored airports and Canberra Airport. The higher price sensitivity and flexibility of leisure passengers decreases the scope for market power in domestic aeronautical services at these airports.

More than half (54 per cent) of passengers surveyed in a sample of 54 regional airports in 2014-15 said their purpose of travel was for business reasons. About one third were travelling for leisure reasons and the remainder were visiting friends and relatives (ACIL Allen 2016). The proportion of business passengers in this sample is relatively high. This may indicate that demand for flights to and from regional destinations in the sample is relatively inelastic. Inelastic demand is generally associated with market power, but other characteristics of regional airports, including high fixed costs of operation and a small passenger base, make it unlikely that they have market power (section 3.3).

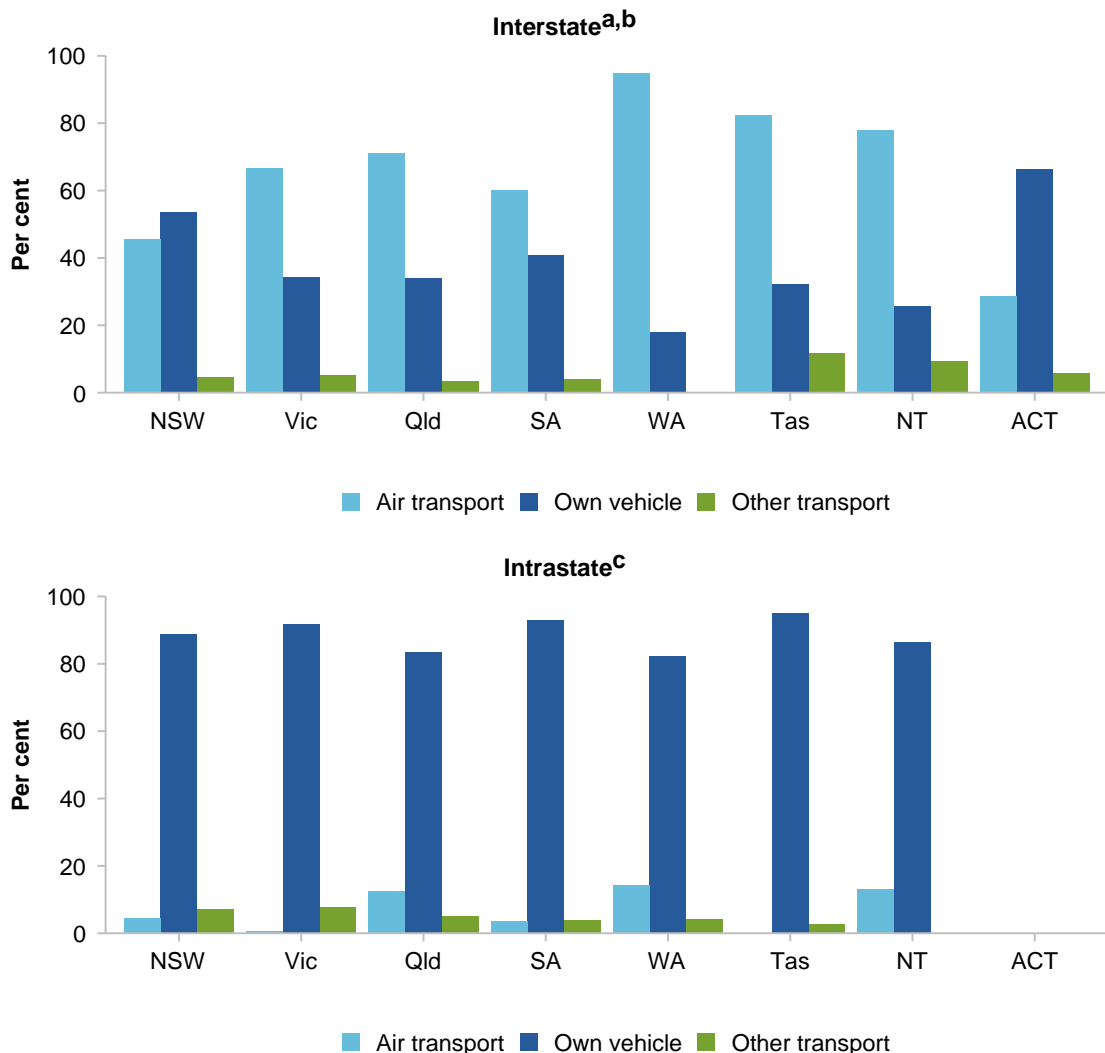
Modal substitutes

Passengers have more choice where there are modal substitutes, such as road or rail transport, and modal substitution can constitute a significant competitive constraint on an airport.

There is limited scope for modal substitution on longer routes within Australia. The main mode of transport between most states and territories is air travel (figure 3.5). This is especially the case for travel to or from capital cities, and for large states and territories with isolated population centres — for example, 94 per cent of interstate overnight domestic visitors to Western Australia use air transport. Alternative modes of transport are generally poor substitutes for interstate (long distance) air transport and therefore place little competitive constraint on airports, especially on routes between capital cities.

Figure 3.5 Air transport is used for most interstate trips, but not for intrastate trips

Mode of transport between and within states and territories, 2018



^a Components may not add to total as overnight visitors may have used more than one mode of transport during their trip and total includes persons not asked. ^b 'Own vehicle' for Tasmania refers to passengers travelling with their car on the interstate ferry service. ^c Data were not published for ACT due to a small sample.

Source: Tourism Research Australia (2018c).

An exception is the Sydney–Canberra route. The proximity of Canberra to Sydney reduces the time and cost of travelling by car, bus or train, increasing the potential for substitutes compared with, say, the Sydney–Melbourne route.

This is evident in the number of passengers that choose to substitute to different modes of transport on these routes *in practice*. For example, the price of a one-way economy-class flight from Canberra to Sydney is typically between \$150 and \$400. Alternatively, passengers can take a three hour bus trip via one of two operators, costing \$39–46. Between the two operators, bus services from Canberra to Sydney are provided at least every hour between 4 am and 6 pm each day (Greyhound Australia 2018; Murrays 2018). These services provide total daily transport for up to 3000 passengers, slightly more than the 2600 passengers that travel the same route by plane, on average, each day. The number of people travelling by car between Canberra and Sydney is even greater. AECOM (2013, p. 70) estimated that, in 2009, the number of car trips taken between the two cities was between 2.2 and 2.6 million, or between 6030 and 7230 car trips daily.

By contrast, the Canberra–Melbourne route, an eight hour bus trip costing around \$65, has only two daily services in each direction, catering for considerably fewer passengers than the 3100 daily passengers, on average, that travel on that route by plane (BITRE (unpublished); Greyhound Australia 2018; Murrays 2018). This is likely because the time cost of travelling by bus is much higher than on the Sydney–Canberra route.

There tends to be a greater use of cars compared to air transport when travelling within states and territories (figure 3.5). This is consistent with a (generally) shorter travel time and lower associated travel cost. It may also be due to the hub and spoke network of flight routes which increases passengers' total travel cost and time when they are required to travel via a second airport.

No suitable modal substitutes are available for international travellers. However, international travellers may be willing to travel further or take a connecting domestic flight to an airport in order to take advantage of a less expensive international flight. This is because the time and cost to get to the international airport generally makes up a relatively smaller proportion of the total travel time and cost than is the case with domestic travel.

Is the traveller living in the airport catchment or visiting?

The extent to which an airline passenger has alternatives also depends on whether they live in the catchment area of the relevant airport or if they are visiting the region.

Some visitors have the flexibility to choose their destination — leisure passengers in particular have the option of switching travel destinations. For example, a passenger interested in scuba diving might choose between the Ningaloo Reef in Western Australia and the Great Barrier Reef in Queensland. Switching may also occur between international destinations — a passenger may choose between Thredbo and Queenstown for a skiing

holiday, or between Sydney and New York for a place to spend New Year's Eve. There is no requirement for the two destination airports to be near to each other to be good substitutes.

Airports with a high proportion of passengers travelling for leisure and a very small permanent population in their catchment area, such as Hamilton or Whitsunday Island airports in Queensland, will face more competition and have less market power than airports with densely populated catchment areas. All airports face a limited amount of competition from other airports due to switching from visiting leisure passengers.

A4ANZ (sub. DR106) argued that destination substitution is irrelevant for passengers wishing to depart from an airport that serves a large population base. The Commission agrees that some passengers have little choice of departure point, regardless of the purpose of their travel, although this is not always the case. For example, a regular bus service operates from Canberra direct to Sydney Airport, thereby allowing Canberra residents to choose Sydney Airport as their departure point. The Commission also notes that destination substitution is not the only factor that can constrain an airport's market power (discussed below).

3.3 Constraints on the exercise of market power

Even if an airport has market power, it may face constraints that limit its ability or incentive to exercise that power in a way that is detrimental to the community. Such constraints may occur due to countervailing power, bargaining power more broadly, the commercial incentives of the airport operator or a low level of demand.

Airlines' countervailing power

Whether an airline has countervailing power depends on a number of factors. Arblaster (2016) stated that an assessment of countervailing power involves considering factors relevant to negotiations that reflect the relative bargaining powers of buyers and sellers.

Countervailing power arises when an airline has a strong bargaining position and could threaten to bypass an airport or reduce demand for its services. Countervailing power is more likely to occur when an airline controls a significant proportion of the market, so the degree of countervailing power an airline has varies by airport. Other factors that can increase the bargaining power of an airline, and therefore its countervailing power, include its ability to:

- threaten and act on any threats to change (even at the margin) parts of its operations, including its aircraft types and schedules
- leverage Commonwealth lease conditions that limit the circumstances where an airport operator can deny access to aeronautical services. This provides airlines with an incentive to delay concluding commercial negotiations until a more favourable outcome is reached (chapter 4)
- engage in lobbying (for example, through media) to achieve a more favourable outcome.

Airlines' ability to seek declaration of airport services through the National Access Regime under Part IIIA of the *Consumer Competition Act 2010* (Cwlth) also increases their countervailing power (discussed in chapter 9).

The market for domestic air transport services in Australia is highly concentrated. Together, Qantas Group, Virgin Australia Group and Regional Express (Rex) accounted for over 95 per cent of all domestic RPT flights in 2017-18 (BITRE unpublished). In 2017:

- Qantas Group serviced about 60 per cent of all domestic passengers in Australia. It serviced the majority share of domestic passengers at all Australian airports with passenger volumes above 500 000 (figure 3.6) and for 38 of the busiest 40 routes (by passenger movements)
- Virgin Australia Group serviced about one third of total passengers in Australia. It does not have a majority share of passengers at any airports with passenger volumes greater than 500 000, but it has a majority share of passengers on two of the busiest 40 routes
- Rex's share of total passengers is modest compared with Qantas Group and Virgin Australia Group (about 2 per cent). It does not have a majority share of passengers at any airports with passenger volumes greater than 500 000, or on any of the busiest 40 routes, yet is the sole operator on about 80 per cent of the routes that it services (Rex, sub. 63, p. 4).

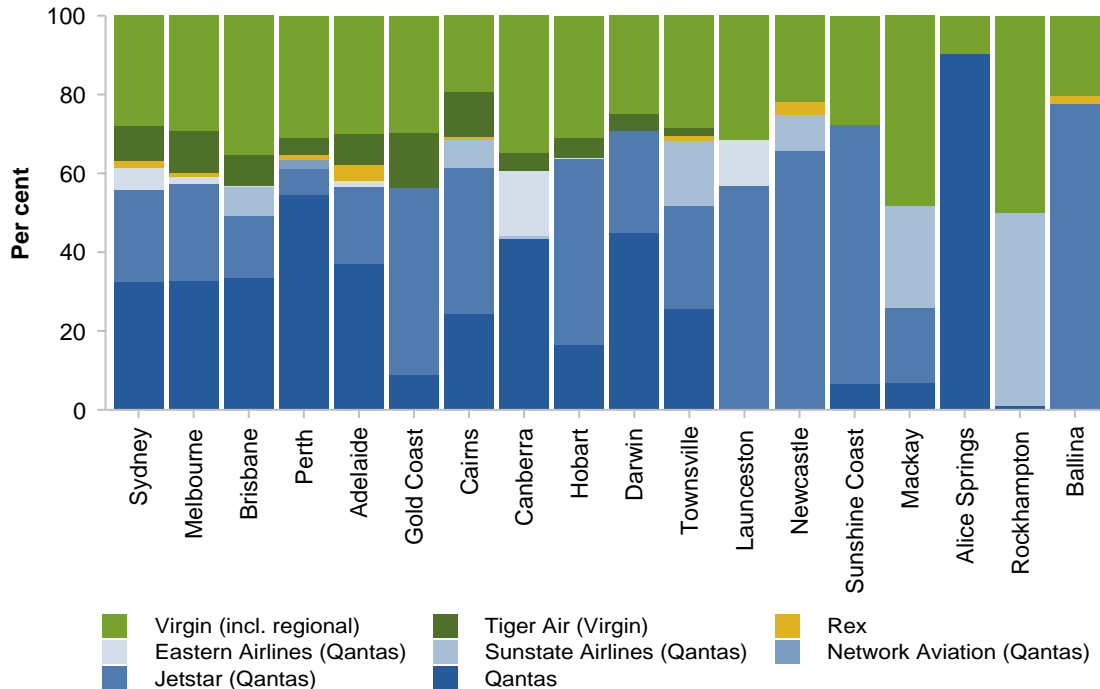
Some inquiry participants, particularly airports, said that domestic airlines have significant countervailing power (AAA, sub. 50; Adelaide Airport, sub. 32; Australian Airports Investors Group, sub. 20; Brisbane Airport, sub. 38; Canberra Airport, sub. 56; Hobart Airport, sub. 31; Melbourne Airport, sub. 33; North Queensland Airports, sub. 49; Northern Territory Airports, sub. 8; Perth Airport, sub. 51; Starkie, sub. 22; Sydney Airport, sub. 53).

Other participants strongly disagreed that airlines have significant countervailing power. For example, Virgin Australia Group (sub. DR142, p. 3) said the draft report 'grossly overstates' the extent to which an airport is constrained by countervailing power, while Qantas Group described airline countervailing power as a 'myth' (sub. DR115, p. 7). A4ANZ (sub. 83, sub. DR106), the International Air Transport Association (sub. 27), Qantas Group (sub. 48, sub. DR115), Rex (sub. DR108), and Virgin Australia Group (sub. 54, sub. DR142) all said that for airlines to have countervailing power they must be able to *credibly* threaten to bypass an airport. A4ANZ also submitted that 'for countervailing power to be at all relevant in relation to an assessment of market power, any costs from a break down in bargaining need to be predominantly borne by the airport' (sub. 44, p. 17). The Australian Competition and Consumer Commission (ACCC) stated that while countervailing power arising from the ability to withdraw services may exist for some airline groups, it is limited (sub. DR158).

The Commission agrees that an airline will rarely be able to bypass or substantially reduce services at a monitored airport, without incurring commercial losses. However, there may be reasons for an airline to engage in such behaviour. For instance, if an airline negotiates with many airports then it might reduce services at one following a breakdown in negotiations in order to show other airports it is prepared to take a strong bargaining stance in future negotiations.

Figure 3.6 Domestic air transport services are concentrated^a

Share of domestic passenger market, by airline



^a Airports that served more than 500 000 passengers in 2017.

Source: Commission estimates based on BITRE (unpublished).

In practice, withdrawal of services on certain routes is more likely to occur at regional airports than at a monitored airport. Most of the regional airports for which the Commission has data are serviced by a single RPT airline. In contrast, many airlines operate at the monitored airports. (Examples where Rex has withdrawn or threatened to withdraw from a route or airport in response to a rise in aeronautical charges are presented in chapter 4.)

Rex (sub. DR108) argued that regional airlines do not have countervailing power, even in the case where it is the sole operator at the airport, because the threat of exit would be futile as another airline would fill the gap in demand for services. The Commission acknowledges that an airline’s threat to withdraw or reduce its services at an airport is less credible when a competitor airline can meet any gap in demand for the airport’s services, but notes that this will not always be the case. For example, Rex withdrew the Mildura–Sydney air service in October 2018. More than 6 months later, no direct air service exists between Mildura and Sydney, despite both Qantas Group and Virgin Australia Group operating other services out of Mildura Airport. The decision by an airline to increase services on a route vacated by another depends on a number of factors, including the cost of establishing the service, demand for the service, and the resources available to the airline.

Melbourne Airport argued that airlines could use marginally profitable services tactically to exercise bargaining power (trans., p. 358). The decision to reduce the number of services

may be due to high aeronautical charges, but it may also be partially (or wholly) due to external factors, such as the level of demand or the availability of aircraft and crew.

An airline can strengthen its bargaining position, and therefore its countervailing power, in other ways. As passenger numbers often form the basis of aeronautical charges, an airline can also reduce the size of aircraft that it uses on a route. A major airline, such as Qantas, could redistribute its fleet over its network of routes to achieve a change in passenger numbers at a particular airport. Starkie argued that small incremental changes in airline demand for airport services could offer a credible threat to airports.

Airport capital is generally fixed, if not always sunk. Thus, a small reduction in demand by airlines' can have a disproportionate impact on operating margins of an airport. (This is to be contrasted with the ability of most airlines to redeploy their capital *relatively easily*).

... A mixed fleet airline could, for example, reduce its throughput at an airport by reducing the size of aircraft used on particular routes (change of gauge) whilst holding service frequency constant. If necessary, to balance passenger demand with (reduced) aircraft capacity the airline could increase prices (marginally) in those market segments with inelastic demand, resulting in minimal impact on airline net revenues.

... Such strategies would be more effective where an airline commands a large proportion of the overall market as is the case at many of Australia's regional airports. But, similar strategies could be effective at major airports where an incumbent airline operates from that airport a number of 'thin', monopoly routes. In such circumstances, a change of aircraft gauge or service frequency is less likely to allow scope for competitive entry. (sub. DR119, p. 1)

Airlines can also have strong bargaining power in negotiations with airport operators because, even without an agreement in place, airlines are able to access airport services and can refuse to pay charges at the level determined by the airport (AAA, sub. 50). A4ANZ stated that 'tough reputation and negotiation tactics such as "holding out" on a deal do not necessarily represent genuine countervailing power' (sub. DR106, p. 19). The Commission disagrees — the ability to delay concluding negotiations on agreements that would result in an increase to charges, while still accessing airport services, does increase the bargaining power of airlines (chapter 4). It is behaviour that benefits the airline — at least in the short term — while harming the airport. Further, it is a power that no individual or small organisation has over suppliers such as gas, electricity and telecommunications — regulated utilities that airline representatives have argued elsewhere should be compared with airports. For example, a person who does not pay their utility bill can, in some cases, be disconnected by the supplier, especially when there are no solid grounds for refusal to pay (for example, financial hardship or critical medical need).

Airlines can also use lobbying to exert pressure on airports to reach a favourable outcome (King Island Council, sub. 26; Parker and Geoffrey 2016; Starkie, sub. 22). Breust (trans., p. 184) said in relation to countervailing power at regional airports:

... you've really only got two ways of exercising countervailing power. That is to go through the media and the political process and stir it up locally and lobby hard at the political level. The other bit of power that you've got is walking away. Or reducing services.

The Commission considers that airlines have varying degrees of bargaining power and can, and do, exert significant countervailing power on airport operators. This countervailing power is a constraint on airports exercising their market power. Qantas Group is likely to have significant bargaining power in its domestic aeronautical services at most airports where it is a major customer, which includes the monitored airports (figure 3.6). Rex is also likely to have significant bargaining power at regional airports where it is the only RPT operator or where it carries the majority of passengers. Under certain conditions, Virgin Australia Group and other airlines could have some power too. In contrast, international airlines likely have less countervailing power. Any threat by them to withdraw or reduce services would not be as credible because international airlines operate in a highly competitive market, meaning that there are alternative airlines that can readily fill the gap in demand.

An airline with countervailing power can constrain an airport from exercising its market power by, for example, forcing the airport to lower its aeronautical charges. However, any reduction in aeronautical charges will not necessarily be passed on in full, or in part, to consumers through less expensive air fares (chapter 2). When lower charges are not passed through to passengers the rents from market power are shared between the airport and airline. In this case countervailing power does not improve overall welfare — passengers still pay a ticket price that reflects the exercise of market power (Forsyth, sub. 15; Arblaster 2016).

Airport operators' commercial incentives

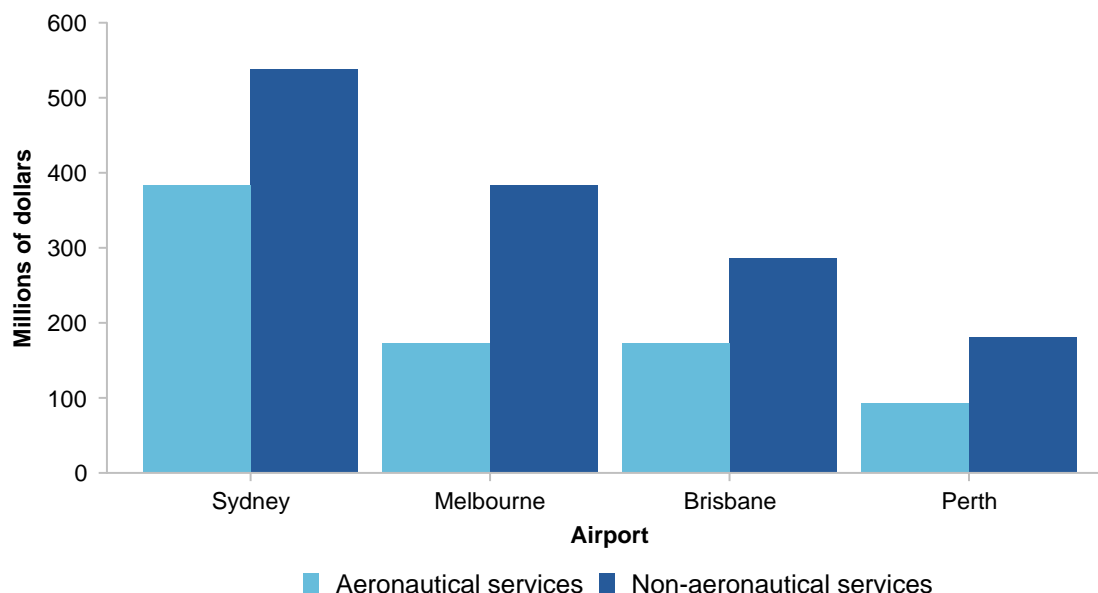
Operators of the monitored airports argued that the significance of non-aeronautical revenue reduces their incentive to overcharge for aeronautical services, as doing so could constrain growth in passenger throughput. Non-aeronautical services accounted for more than half of the operating profits at each of the monitored airports in 2017-18 (figure 3.7).

Some non-aeronautical revenue is unrelated (or loosely related) to passenger throughput. For example, revenue from shopping centres and business parks, which are features at airports such as Essendon, Canberra and Brisbane, is unlikely to vary significantly with the number of flights and passengers. Other sources of revenue are more closely linked to passenger throughput, including parking charges, landside access charges, and rental revenue from retailers located within the terminal.

The Commission considers that airports have an incentive to grow passenger numbers in order to grow non-aeronautical revenue and this, to some extent, reduces their incentive to exercise market power in aeronautical services. The effect of an increase in aeronautical charges on non-aeronautical revenues is, however, likely to be small at the margin (box 3.1). As such, airports' profits from non-aeronautical services are unlikely to be a significant constraint on the exercise of market power in aeronautical services.

Figure 3.7 Non-aeronautical services provide a significant share of airport profits

Operating profits at monitored airports, by service type, 2017-18



Source: ACCC (2019).

Level of demand

The level of demand for airport services can act as a constraint on market power, even for airports that are geographic monopolies, where aeronautical charges needed to cover the average cost of running an airport are higher than what passengers and airlines are willing to pay (figure 3.8). Frontier Economics stated:

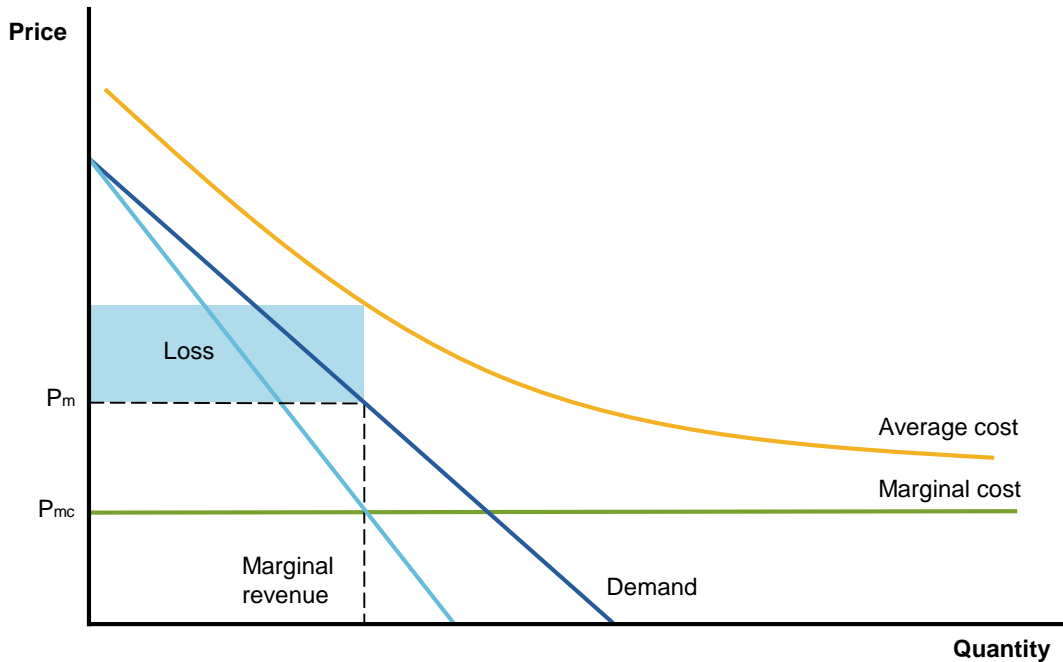
The tendency to tip to monopoly does not necessarily mean that each airport has substantial market power. The ability of a monopoly to generate monopoly profits will depend on the demand for the various services that it produces. Indeed, even a single producer monopoly may have little market power if demand for its services is relatively low compared with the fixed costs it needs to recover. (trans., p. 456)

Some inquiry participants argued that regional airports have, and are exercising, market power. Participants stated that at some airports increased aeronautical charges were driven by unnecessary infrastructure upgrades and questionable asset management practices (A4ANZ, sub. 44; RAA, sub. 66; Rex, sub. 63).

The Commission considers that few, if any, regional airports are likely to be exercising market power. Many are unable to cover their operating costs (discussed below), so will not have market power, let alone the ability to exercise it. More likely explanations for unnecessary infrastructure upgrades and questionable asset management practices relate to

poor governance, access to Australian and State Government grants and the capability of local councils in managing airport infrastructure (chapter 10).

Figure 3.8 Level of demand can constrain market power



Even those regional airports that are profitable are unlikely to have significant market power and, in any case, are unlikely to be able to exercise it. Regional airports in tourism destinations compete for leisure passengers and many regional communities — particularly those in remote areas — rely on air transport.

Many regional airports run at a loss

Inquiry participants raised concerns about the ability of regional airports to cover costs (AAA, sub. 50; King Island Council, sub. 26). The Regional Airport Users' Action Group and Geoff J Breust commented that airports operated by local governments often run at a loss:

They have little ability to generate any real revenue. Most consider their airport as a mandatory community facility and fund it from ratepayers. While a few impose aircraft landing charges most do not because they wish to attract visitors. Local leases provide minimal revenue. Accordingly, many local government authorities are extremely concerned about the future of their airports because they are unable to adequately fund them. (sub. 9, p. 4)

A 2016 report commissioned by the AAA on the economic contribution and challenges faced by regional airports in Australia found that 22 regional airports in the sample of 36 airports did not cover their operating expenditures in 2014-15 (ACIL Allen 2016, p. 21). The

Commission has also obtained a snapshot of operating profit margins for 35 regional airports (table 3.1). About one third of regional airports in the sample (10 airports) had negative operating margins. This means that these airports did not generate enough revenue to cover their total costs (operational expenditure plus depreciation and amortisation, excluding finance and interest costs). Such airports rely on local, regional or other government assistance to fund the airport's operations, maintenance and upgrades (chapter 10).

Table 3.1 Financial results of selected regional airports^a
By increasing revenue

<i>Airport or airport company</i>	<i>State/territory</i>	<i>Revenue (\$'000)</i>	<i>Total costs^b (\$'000)</i>	<i>EBIT (\$'000)</i>	<i>Operating margin (%)</i>
Narrandera ^c	NSW	104	330	-226	-217
Grafton	NSW	168	539	-371	-221
Taree	NSW	220	1 419	-1 199	-545
Lismore	NSW	277	468	-191	-69
Moruya	NSW	381	524	-143	-38
Bathurst	NSW	484	666	-182	-38
Moree	NSW	701	411	290	41
Broken Hill	NSW	725	1 146	-421	-58
Whyalla ^d	SA	738	760	-22	-3
Griffith	NSW	808	687	121	15
Mount Gambier	SA	935	855	81	9
Esperance	WA	1 100	1 087	13	1
Orange	NSW	1 166	1 390	-224	-19
Armidale	NSW	1 746	1 424	322	18
Cloncurry ^d	Qld	2 023	1 506	517	26
Port Lincoln ^d	SA	2 028	1 540	488	24
Hervey Bay	Qld	3 522	3 318	204	6
Wagga Wagga	NSW	3 767	5 459	-1 692	-45
Learmonth	WA	4 016	3 370	646	16
Roma	Qld	4 307	3 618	689	16
Dubbo	NSW	4 549	3 521	1 028	23
Proserpine	Qld	5 170	5 117	53	1
Tamworth	NSW	5 185	5 193	-8	0
Port Macquarie	NSW	5 230	4 003	1 227	23
Bundaberg	Qld	5 438	3 801	1 637	30
Ballina	NSW	5 780	4 930	850	15
Albury	NSW	6 546	4 627	1 919	29
Coffs Harbour	NSW	7 243	4 954	2 289	32
Emerald	Qld	7 475	5 574	1 901	25
Kalgoorlie	WA	10 410	8 703	1 707	16
Newman	WA	12 210	8 416	3 793	31
Gladstone ^c	Qld	14 144	9 817	4 327	31
Rockhampton	Qld	15 314	14 240	1 075	7
Port Hedland ^d	WA	19 838	12 545	7 293	37
Karratha	WA	21 946	12 772	9 174	42

^a Data are from 2017 annual financial reports unless otherwise noted. Sample is not representative and is based on available data. ^b Total costs is operational expenditure plus depreciation and amortisation less finance and interest costs. Accounting practices in relation to the depreciation of assets may vary between airports. ^c Data are for 2015-16. ^d Data are based on budget forecasts, rather than actual outcomes.

Source: Commission estimates based on council and company financial statements.

Not all regional airports run at a loss. At some regional airports demand for airport services is sufficient to enable the airport operator to break even or turn a profit. Two examples are Hervey Bay and Cloncurry airports (table 3.1). Hervey Bay caters to the tourism industry,

while Cloncurry has a large share of passengers that work in the resources sector. The Cloncurry Shire Council stated that in 2016-17, 60 per cent of flights into Cloncurry Airport were charter, while the remaining 40 per cent were RPT flights with a high share of workers in the mining industry (SRRATC 2018, p. 2). While these airports are profitable, they are unlikely to be in a position to earn excessive profits from the exercise of market power.

3.4 Summary of findings

Domestic aeronautical services

Monitored airports

Sydney, Melbourne, Brisbane and Perth airports exhibit characteristics consistent with them having significant market power in domestic aeronautical services. This creates a *prima facie* case for regulatory intervention (chapter 2), even when airlines' countervailing power is considered.

Sydney Airport is a geographic monopoly, at least until Western Sydney Airport commences operation after 2026. (The extent to which Western Sydney Airport will provide significant competition, and over which services, is not clear.) Sydney Airport is also the gateway to the city of Sydney, which is a significant business hub and highly differentiated product in domestic (and international) tourism markets, meaning passengers are less likely to substitute to another destination. There are few modal substitutes, with the exception of Canberra which accounts for less than four per cent of total domestic passenger movements at Sydney Airport (Commission estimates based on BITRE, unpublished). Consequently, Sydney Airport operates in a market for domestic aeronautical services where it is the only major provider.

Melbourne Airport, like Sydney Airport, is the gateway to a city that is a business and tourism hub, meaning that passengers are less likely to substitute to another destination. There are no strong modal substitutes for the majority of Melbourne Airport's passengers and it faces little competitive constraint from Avalon Airport, even in the market to serve LCCs. Consequently, Melbourne Airport operates in a market for domestic aeronautical services where it is essentially the only major provider.

Brisbane Airport faces competition for some domestic services — Gold Coast and Sunshine Coast airports could theoretically service up to 90 per cent of its passenger movements. In reality, these two airports are imperfect substitutes for Brisbane Airport as flight times and schedules, facilities and travel time to Brisbane vary significantly. There is also a significant difference in passenger mix — Gold Coast and Sunshine Coast airports have a much higher proportion of non-business passengers compared with Brisbane Airport. This reflects limited substitutability for a significant proportion of passengers using Brisbane Airport. Gold Coast and Sunshine Coast airports act as competitive constraints on Brisbane Airport, but Brisbane Airport maintains a high level of market power in domestic services.

Perth Airport is a geographic monopoly with few modal substitutes. However, Perth is less of a business and tourism hub compared to other major cities (and following the end of the resources boom). Perth Airport operates in a market for domestic aeronautical services where it is the only provider.

Many stakeholders acknowledge that these airports have some market power. For example, the Australian Airports Association (sub. 50, attachment 1, p. i) stated that ‘... the structural likelihood that the airports [Sydney, Melbourne, Brisbane and Perth] hold a degree of market power is taken as a given’.

At a minimum, these findings point to the need for continued monitoring of these airports. Whether further changes to the regulatory regime are warranted, however, will depend on whether these airports have exercised their market power to the detriment of the community, discussed in chapters 4, 5 and 6.

Non-monitored airports

The airports that participate in the second-tier voluntary monitoring regime — Adelaide, Cairns, Canberra, Darwin, Gold Coast and Hobart — do not have significant market power that warrants regulatory intervention, although this could change over time. These airports should be included in the ACCC monitoring regime if, in a future Commission inquiry, they are found to have significant market power. There is sufficient public information to assess whether an airport has such market power.

Adelaide and Canberra airports

Adelaide and Canberra airports were part of the monitoring regime until 2012 and 2006, respectively. The Commission is satisfied that neither Adelaide nor Canberra airports have significant market power at this time.

- Canberra Airport serves a high proportion of non-leisure passengers, which tend to be relatively insensitive to price changes. However, there is some scope for modal substitution, and good availability of road transport alternatives, for the Canberra–Sydney route — which accounted for 29 per cent of passenger movements at Canberra Airport in 2018 (Canberra Airport, sub. DR145, p. 10). Canberra Airport also faces some competition from Sydney Airport, particularly on international flights and LCC services.
- Adelaide Airport serves a higher proportion of leisure passengers than the monitored airports. Leisure passengers are more responsive than non-leisure travellers to increases in charges (which reduces the airport’s market power). It is also not a gateway to a major business hub.

In the draft report, the Commission said that Canberra Airport did not have significant market power, for reasons including the scope for modal substitution on the

Canberra–Sydney route. A4ANZ (sub. DR106) argued that modal substitution is immaterial, even for Canberra. It argued that it is only relevant for 30 per cent of passenger throughput at Canberra Airport and that some passengers (such as business passengers) would not consider alternative travel modes viable.

Travelling by air transport between Sydney and Canberra could be more time effective, but not in all cases, particularly where the origin and destination points are far from the airport. The time taken to travel includes the journey time from the initial departure point to the origin airport, as well as the time taken to travel from the destination airport to the final destination point. For some passengers, particularly those travelling to or from the southern or western suburbs of Sydney, road travel between Sydney and Canberra could be more time effective than air travel, even for business travellers.

It is likely that a high proportion of business trips made to Canberra from Sydney, and even more so from other parts of New South Wales, are by car. For instance, AECOM (2013, p. 67) found that in 2009, 55 per cent of business trips between east coast towns or cities located within 250 km and 600 km of each other were made by car (the distance between the Canberra and Sydney CBD is about 290 km). For shorter distances (less than 250 km), nearly all business trips (91 per cent) were made by car.

The majority of domestic visitors to Canberra are from New South Wales. In 2014, 71 per cent of visitors to Canberra originated from Sydney and other areas of NSW (Commission estimates based on TRA (2015)). This is significant given the high use of cars for business trips on the east coast of Australia.

Another factor affecting modal substitutability is the reliability of air transport services. Carew said modal substitutability between Canberra and Sydney is affected by ‘Qantas and Virgin’s inability to run on time and their many cancellations’ (trans., p. 601). Canberra Airport is upgrading its instrument landing systems, but cancellations and delays due to fog, especially in the winter months, have been common.

In summary, Canberra Airport does serve a high share of business passengers but there are good modal substitutes, in particular for the Canberra–Sydney route. On balance, the Commission is still of the view that Canberra Airport does not have significant market power in aeronautical services at this time.

In the draft report, the Commission found that Canberra Airport is closer to the threshold of having significant market power in aeronautical services than Adelaide (and the other non-monitored) airports. In response, Canberra Airport argued that there has been no change in the characteristics of the airport’s market since previous Commission inquiries that would result in Canberra Airport being closest to the threshold (sub. DR145, DR169).

However, Canberra is more of a business hub than Adelaide, and Canberra Airport’s share of business passengers (who are less price sensitive than leisure passengers) has been growing in recent years. The share of passengers travelling overnight for business to Canberra (by air) increased from 58 per cent to 63 per cent between 2011 and 2017. For

Adelaide Airport the share of overnight business passengers decreased from 44 per cent to 40 per cent over the same period (Commission estimates based on unpublished TRA data). On that basis, the Commission concludes that Canberra Airport is still closest to the threshold for concern.

Cairns, Darwin, Gold Coast and Hobart airports

Cairns, Darwin, Gold Coast and Hobart airports do not have significant market power and should not be added to the monitoring regime at this time. In summary:

- none of these airports are gateways to major business hubs — at least not to the extent of the monitored airports. As a result, passengers and airlines are more likely to be able to substitute to other destinations, meaning that these airports have less market power
- these airports serve a higher proportion of leisure passengers than the monitored airports, which is associated with more elastic demand (and less market power). Leisure passengers also have more flexibility in their holiday destination, meaning these airports compete with characteristically similar airports that are not nearby. This is especially the case for Cairns, Gold Coast and Hobart airports. Gold Coast Airport is also significantly constrained by Brisbane and Sunshine Coast airports.

Regional airports

Some regional airports turn a profit or break even. However, they will be unlikely to be able to exercise market power for reasons that include:

- the relatively lower barriers to entry for small scale private airports that support construction and extraction activities in the resources sector
- countervailing power from airlines — of the 103 airports for which the Commission has data, 53 are serviced by a single RPT airline (BITRE (unpublished))
- competition from other airports in tourism destinations.

Many regional airports do not have sufficient demand for airport services to cover the costs of running the airport. Regional airports with costs higher than what users are willing to pay do not have market power.

International aeronautical services

International aeronautical charges generally make up a small proportion of the total cost of an international airfare. This means that it is more likely that airports could raise aeronautical charges without a strong demand response from passengers (and consequently airlines). Further to this, the market for international flights is highly competitive, reducing the potential for countervailing power on the part of airlines. These factors are associated with higher market power for an airport providing those services. However, this is partly offset

because airports providing international services face competition from both Australian and international airports.

The monitored airports are gateways to cultural, business and tourism hubs and are not readily substitutable. This is especially the case for Sydney, Melbourne and Brisbane airports. Perth Airport is less of a gateway than the other monitored airports but it still has high market power due to its isolation. The monitored airports all have significant market power in international aeronautical services.

Smaller international airports, such as Adelaide and Darwin, are not gateways to regions or cities that are major business or cultural hubs. They face strong competition and have little market power in international aeronautical services. Besides the airports that are currently monitored, no other Australian airport has significant market power in international services.

4 Negotiations between airports and airlines

Key points

- Airport and airline operators typically engage in commercial negotiations to secure aeronautical and terminal agreements on charges, types of services, service quality and future capital investments.
- Commercial negotiations can be challenging and lengthy — this is not unique to aviation.
 - Some five-year agreements have taken three years to negotiate. This is in part because agreements can involve complex and contested investments that affect many parties, including competing airlines, with different objectives.
- The Commission has assessed the conduct of parties in the negotiation process, and the outcomes reached through negotiation, to identify whether airport operators have systematically exercised their market power.
 - An airport operator exercising its market power could, for example, make take-it-or-leave-it offers, refuse to provide sufficient and timely information to negotiating parties, or set unduly high charges.
- On balance, the airports with significant market power — Sydney, Melbourne, Brisbane and Perth — have not systematically exercised that power in negotiations with airlines to the detriment of the community.
 - Airport and airline operators have incentives to reach an agreement, especially given the need for new investments in aeronautical infrastructure to meet demand growth.
 - Agreements support risk sharing between airports and airlines and have underpinned significant long-term investment in aeronautical assets.
 - Airport operators often use a building block model to share information with airlines, where charges are ‘built up’ based on an airport’s expected costs. Use of this model indicates that airport operators consider it necessary to justify their prices during negotiations.
- Efforts by airline and airport operators to enhance the negotiation process through a set of agreed principles could improve efficiency. For example, participants identified scope for improved performance-related incentives for airports and standard clauses in agreements. Parties could voluntarily pursue these principles through industry-led measures, or request that the Australian Government facilitate this process.
- Some agreements between airport operators and airlines contain clauses that constrain an airline’s access to regulatory remedies for the exercise of market power and clauses that restrict an airport’s ability to offer incentives to airlines other than the signatory airline. These (and any other) anticompetitive clauses should be removed from all agreements.

Commercial negotiations between airport operators and service users have been a central feature of the Australian light-handed regulatory regime since 2002. Commercial negotiations directly link the interests of airport users to airport operations and provide investment incentives for parties, with fewer distortions to production and investment decisions compared with, for example, the price cap arrangements that were in place in Australia prior to 2002 (Littlechild 2009; PC 2012a).

Airport and airline operators typically engage in negotiations to secure aeronautical and terminal agreements on charges, types of services, service quality and future capital investments. However, an airport operator exercising its market power could use commercial negotiations to set unduly high charges for its services or to justify inefficient investment decisions. These outcomes may warrant government intervention in negotiations, as they could lead to services that do not meet users' reasonable expectations or compromise the efficient operation of airports to the detriment of the community (chapter 2).

4.1 Assessing commercial negotiations

A focus on process and outcomes

The terms of reference ask the Commission to consider whether the current regulatory regime is effective in 'facilitating commercially negotiated outcomes in airport operations'. The primary focus of this chapter is negotiations between operators of airports and airlines for aeronautical and terminal services at the airports that have significant market power — Sydney, Melbourne, Brisbane and Perth airports (the monitored airports). Aspects of the negotiation process and resulting agreements for other airports are also relevant.

The Commission has assessed two aspects of commercial negotiations:

- the behaviour of parties in the negotiation *process*
- the negotiation *outcomes* reached by the parties.

The Commission's assessment has drawn on the *Aeronautical Pricing Principles* (chapter 2), which articulate general principles for the pricing and negotiation of aeronautical services, including that prices and other terms and conditions of access should:

- (i) be established through commercial negotiations undertaken in good faith, with open and transparent information exchange between the airports and their customers and utilising processes for resolving disputes in a commercial manner (for example, independent commercial mediation/binding arbitration); and
- (ii) reflect a reasonable sharing of risks and returns, as agreed between airports and their customers (including risks and returns relating to changes in passenger traffic or productivity improvements resulting in over or under recovery of agreed allowable aeronautical revenue). (Costello 2007)

A lack of good faith bargaining in the negotiation process or an unreasonable sharing of risk and returns suggest that a negotiating party could be exercising its market power. An airport operator could exhibit a lack of good faith bargaining during the negotiation *process* if it:

- makes take-it-or-leave-it offers on charges and other terms of access that are accepted by negotiating parties, given an inability to negotiate any alternative
- denies access to a service (or credibly threatens to)
- refuses to provide sufficient and timely information to negotiating parties to assess the service offer.

An agreement *outcome* may not reflect a reasonable sharing of risk and returns if it includes:

- charges that are set above the long-run average cost of provision — the minimum an airport operator can charge to ensure it remains viable over time and a benchmark for economic efficiency (chapter 2)
- inefficient investment by airport operators
- risks that are disproportionately borne by airport users
- clauses that seek to unreasonably constrain a party's behaviour.

The content of agreements and the processes to negotiate them are confidential between the signatory parties. The Commission has examined a selection of agreements from Sydney, Melbourne and Canberra airports as part of this inquiry to help inform its conclusions.

Negotiations are influenced by incentives and bargaining power

Negotiating parties have incentives to reach an agreement

The incentives of negotiating parties influence the negotiation process and the outcomes reached. Conflict between negotiating parties can arise because parties have different — and often competing — incentives and objectives. Sydney Airport noted that '[t]here is an inherent tension between airlines, which generally have much shorter term commercial imperatives, and airports, which must undertake long-term infrastructure investment' (sub. 53, p. 32). Agreements can involve complex and contested investments that affect many parties, including competing airlines, with different objectives. Differing incentives and objectives are commonplace in other sectors.

Airport operators have strong incentives to reach agreements with airlines. The monitored airports are commercial businesses and operators seek to maximise their profitability. They are motivated to:

- maintain cash flow and minimise uncertainty to underpin airport investment financing
- grow passenger capacity and throughput to increase aeronautical and non-aeronautical revenue (Melbourne Airport, sub. 33). (The complementarity of aeronautical and non-aeronautical services is discussed in chapter 1.)

-
- share investment risks with airport users, given the ongoing need for infrastructure investment to meet demand growth.

Airline operators also seek to maximise their profits, but their specific incentives differ depending on their commercial and operating needs. An incumbent airline could have incentives to delay or block investments if, for example, it could generate greater profits by minimising additional competition than it could from investments that expand its own services at the airport. Low-cost carriers (LCCs) could dispute investments that improve service quality or amenities for passengers at common-use facilities in order to keep their costs low (PC 2012a; Sydney Airport, sub. 53).

Ultimately, the operators of airports and airlines have commercial and operational incentives to reach an agreement and parties are, to some extent, mutually dependent. Agreements underpin cash flow and other measures of financial performance that support certainty for investment financing. Further, both airports and airlines have incentives to invest in infrastructure to meet demand growth and passengers' expectations of service quality. Virgin Australia Group noted that:

This is because, if we do not agree to fund the investment, we face a risk that we constrain our ability to grow, and potentially face higher operating costs to manage congestion at airports. (sub. 54, p. 8)

An uneven bargaining position could enable airports to exercise market power

The relative bargaining power of parties influences the negotiation process and the outcomes reached. A number of factors determine bargaining power, including:

- alternative buyers or sellers — a party has more bargaining power if it is able to choose between alternative buyers or sellers, than if it has few or no alternatives. For example, an airport that services several airlines may have more bargaining power over an individual airline than if it has a single airline customer
- access to information — a party has more bargaining power if it is privy to information that could influence the transaction and that other negotiating parties do not know. This could include information on, for example, market conditions such as demand forecasts, or information specific to the bargaining position of other parties, such as a seller's cost structure or a buyer's willingness to pay
- previous commitments — a party can undertake actions prior to or during negotiations that commit it to a particular position
- the risk of breakdown — a party has more bargaining power if it is unconcerned about a breakdown or 'stalemate' in negotiations
- patience — a party that has a higher opportunity cost of negotiating and a greater relative benefit from reaching an agreement typically has less bargaining power (Concina 2015; Muthoo 2000).

How these factors determine negotiating parties' relative bargaining power depends on the unique circumstances of the negotiation. It may be that, in some cases, a customer will have as much or even more bargaining power than a supplier.

Harper et al. observed that the use of bargaining power is not a policy problem *per se*, but that it can have undesirable effects on economic efficiency.

While imbalance in bargaining power is a normal feature of commercial transactions, policy concerns are raised when strong bargaining power is exploited through imposing unreasonable obligations on suppliers and business customers. Such exploitation can traverse beyond accepted norms of commercial behaviour and damage efficiency and investment in the affected market sectors, requiring the law to respond both as a matter of commercial morality and to protect efficient market outcomes. (2015, p. 334)

A significant imbalance of bargaining power in negotiations could lead to an airport operator exercising its market power to the detriment of the community. Airline participants have raised concerns that there is uneven bargaining power between an airport and its users in commercial negotiations (A4ANZ, sub. 44).

4.2 Characteristics of airport–airline agreements

Airports and airlines typically negotiate agreements for aeronautical services, such as runway services, aircraft hangars and maintenance facilities; and terminal services. Operators of airports and airlines have previously negotiated leases for domestic terminals, but have phased out these arrangements as existing leases have expired (chapter 1). The implications of domestic terminal lease arrangements for cost and revenue indicators for aeronautical services are discussed in box 5.1.

Agreements generally run for five years, although this varies depending on the negotiating parties' specific needs, such as the scale of investment required. For example, Brisbane Airport signed an 11-year agreement with most domestic and international airlines in 2012 to support the development of the third runway that is now under construction (Brisbane Airport, sub. 38, pers. comm., 18 January 2019).

Airport operators typically negotiate agreements for domestic services with representatives from individual airlines or airline groups. The Board of Airline Representatives of Australia (BARA) negotiates on behalf of most international airlines for common-use services at international airports. The operators of international airlines can still negotiate individually, and do so for airline-specific services such as airline lounges (BARA, sub. 42).

The main features of airport–airline agreements are largely unchanged compared with when the Commission last considered these agreements in 2011. Agreements typically include:

- charges for aeronautical services, with price paths for future access. This usually includes landing, runway and aircraft parking charges for aeronautical agreements, and per-passenger charges for terminal agreements

-
- other charges to recover direct costs, such as per-passenger security charges
 - discounts on standard scheduled charges (also known as rack rates), such as discounts to support new or expanded routes or if agreed passenger numbers are reached
 - agreed service levels, often with outcomes defined in a service level agreement (SLA)
 - rebates in the event of an airport operator’s failure to meet agreed service standards
 - consultation requirements prior to capital investment by the airport operator
 - dispute resolution arrangements, including, for example, escalation processes or involvement of an independent third party, such as a commercial arbitrator.

Tailored agreements add to complexity but support flexibility

The specific features of an agreement depend on the needs of both negotiating parties. Agreements are often tailored to the requirements of an airline, sometimes with bespoke arrangements within the same airline group, which airport operators noted adds to the complexity of each negotiation (Melbourne Airport, sub. 33; Sydney Airport, sub. 53). Airlines can require different access terms and levels of service, and operators may negotiate different agreement lengths, branding and timing of capital charges (Sydney Airport, sub. 53). LCCs typically use a different bundle of services compared with a full-service carrier. They may for example, opt for stairs rather than an aerobridge, and will often pay a lower charge. Regional airlines can require a different set of arrangements again and some opt to pay scheduled charges in place of negotiating an agreement.

The complexity of an agreement does not necessarily indicate greater sophistication. BARA stated that agreements are often repetitive and lack a logical structure, which unnecessarily adds to the length and complexity of negotiations (sub. 42). BARA identified ongoing challenges with negotiating reasonable commercial terms that meet the accountability benchmarks published by the Airports Council International (sub. 42). BARA also raised concerns regarding certain clauses in office lease agreements that seek to limit actions that ‘bring negative attention to the brand, image or reputation of Sydney Airport’ (sub. DR92, p. 16, sub. DR184). BARA suggested that there is a need for a set of simplified contract terms containing standard ‘boilerplate’ clauses in order to streamline current processes and reduce contract review costs for both parties. The Australian Airports Association (AAA) also supported this proposal (sub. 73) — the Commission’s response is in section 4.3.

Airport participants noted that current negotiation processes provide flexibility for parties to reach an agreement on investment that balances individual airline and collective airport-wide requirements (AAIG, sub. 20; Melbourne Airport, sub. 33; Sydney Airport, sub. 53). This was the case in the negotiations for a new runway at Brisbane Airport. The airport and airlines were able to bundle together a number of different elements as part of a package in order to reach a mutually-beneficial agreement (Brisbane Airport, pers. comm., 18 January 2019).

Service level agreements include performance indicators and rebates

Defining service level outcomes through SLAs in negotiated agreements is international best practice (IATA 2017a). SLAs can motivate airport operators to improve services and facilities, particularly in the context of ongoing growth in demand for air travel.

These agreements can provide airports incentive to deliver the agreed service level and make adequate investment to meet growing demand. Inclusion of service levels can also promote a culture of continuous improvement at airports. (ACCC 2017a, p. 10)

The Commission observed in 2011 that SLAs were increasingly commonplace — 93 per cent of agreements specified at least one required service level (PC 2012a).

Key performance indicators (KPIs) have become a more common characteristic of SLAs since 2011. All monitored airports have developed or are negotiating KPIs of service quality (Brisbane Airport, sub. 38; Melbourne Airport, sub. 33; Perth Airport, sub. 51; Sydney Airport, sub. 53). KPIs define expected levels of service quality and allow airport and airline operators to assess whether the services provided meet their expectations. Recently negotiated agreements include indicators such as on-time performance, queue time and baggage handling. Some airport operators have also included KPI results in consultation processes and capital development plans in order to align their future investments with identified service quality issues (AAIG, sub. 20; Sydney Airport, sub. 53). At Sydney Airport, KPI results are discussed with airlines through the quarterly Industry Consultative Forum (sub. 53).

Some SLAs also include rebates for airlines where airport operators fail to meet agreed service standards. For example, Melbourne Airport's 2017 aeronautical services agreement includes '[a]n Immediate Service Failure Rebate if Melbourne Airport's equipment is not available for use and causes an OTP [on-time performance] issue in excess of 15 minutes' (sub. 33, p. 9). However, Qantas Group (Qantas, QantasLink and Jetstar) stated that at monitored airports, rebate criteria are often too narrow and that the 'value of the rebate is not sufficient to address the risk to the airline of the delay' (sub. DR115, p. 23). BARA also noted that airport operators do not adopt sufficient accountability for service outcomes under current rebate provisions.

... current rebate schemes only cover a narrow range of issues that do not extend to effective management of available capacity. When rebates are paid, airlines are also effectively being handed back some rebate money they have already collectively pre-paid to the airport operator through higher pricing. The airport operator has no genuine financial exposure to service delivery capability. (sub. DR92, p. 7)

Some airports, such as Brisbane Airport, have adopted KPI frameworks but not rebates.

At this stage there are no monetary incentives, or penalties, so to speak. We have a 12 to 18 month transition period to determine whether or not it is working. Currently at this stage airline operators have not raised major concerns, so therefore we'd like to see a transitory period of testing this KPI and SLA framework and therefore agreed to revisit penalties at a later date. (Brisbane Airport, trans., p. 231)

Airline participants indicated that the features of SLAs do not meet their expectations of modern and sophisticated commercial agreements (BARA, sub. DR92; IATA, sub. DR116; Qantas Group, sub. DR115). BARA noted that the addition of KPIs and rebates in SLAs was ‘... at least a decade behind its scheduled need’ (sub. 42, p. 20).

Dispute resolution is available, but uptake is limited

The *Aeronautical Pricing Principles* emphasise the need to resolve disputes in a commercial manner. Airport and airline operators can use formal dispute resolution mechanisms *during* the negotiation process if they are unable to reach an agreement, although the use of these mechanisms is uncommon (AAA, sub. 50). Current options include:

- independent dispute resolution. Participants have provided examples of negotiating parties using third party conciliators (for example, Sydney Airport (sub. 53)). Some participants noted the limitations of current independent dispute resolution, as a party can refuse to participate and the outcome is not necessarily binding (Qantas Group, sub. 48). Other participants also raised concerns in consultations that arbitration or conciliation lacks the flexibility for resolving disputes that involve complex investments or packages of non-price terms
- applying for declaration through the National Access Regime, under Part IIIA of the *Competition and Consumer Act 2010* (Cwlth). An airline seeking access to airport services can apply to the National Competition Council to recommend that the relevant Minister declare specific airport services. Airline participants stated that seeking declaration is costly, time consuming and the outcome can be uncertain (A4ANZ, sub. 44; Qantas Group, sub. 48; Virgin Australia Group, sub. 54), particularly given that the 2017 changes to the declaration criteria are yet to be tested in court
- other legal dispute resolution mechanisms, such as State and Territory legislation to resolve disputes on aeronautical charges in the absence of mutually agreed terms and conditions (AAA, sub. 50). For example, Perth Airport commenced legal action to recover charges from Qantas Group following the expiry of their agreement for aeronautical services (box 4.1).

Airlines have stated that these options are inadequate for resolving disputes during the commercial negotiation process and have proposed alternative arrangements (chapter 9).

Agreements also contain clauses to provide dispute resolution options for parties after the commercial negotiation process has concluded. Some agreements stipulate escalation processes if a dispute were to arise, or mechanisms for commercial dispute resolution (and sometimes, legal recourse) that apply once agreements are executed (AAA, sub. 50; Brisbane Airport, sub. 38; Perth Airport, sub. 51; Sydney Airport, sub. 53).

Box 4.1 Perth Airport versus Qantas Group

In December 2018, Perth Airport commenced legal action in the Supreme Court of Western Australia to recover charges for aeronautical services from Qantas Group (Qantas, QantasLink and Jetstar). The airport is seeking:

All unpaid amounts for Aeronautical Services provided by the plaintiff from 1 July 2018 calculated by reference to the fair and reasonable price for such Aeronautical Services. (*Perth Airport Pty Ltd v Qantas Airways Limited & Ors*, Supreme Court of Western Australia, writ of summons filed 17 December 2018)

Perth Airport stated that the difference between what the airport charged and the airline group had paid between July and September 2018 was in excess of \$11 million.

Perth Airport noted that legal action was ‘... a last resort after numerous attempts by [Perth Airport] to secure a new agreement with Qantas’ (sub. DR114, p. 14).

Perth Airport negotiated with Qantas in good faith for over 15 months (commencing in September 2017), noting that the Qantas Prices and Services Agreement was to expire on 30 June 2018.

Perth Airport made multiple offers of lower operational charges to Qantas, the last of which would have seen the charges the Qantas Group pay for use of Terminal 3 and the airfield, decrease by 13.0% when compared with the previous year. Qantas however, insisted on unilaterally determining the price it would pay for use of facilities funded by Perth Airport investors. In fact, Qantas did not even respond formally to the last offer made by Perth Airport.

The amount Qantas unilaterally determined it would pay was 42.1% lower than Perth Airport’s last proposal, and 50.3% lower than the prices paid in the previous year. (sub. DR173, p. 2)

Qantas Group countered that, although negotiations have been ongoing, ‘... we have continued to pay Perth Airport — just not at the unjustified rates they have proposed’ (David 2018). Qantas Group pointed to Perth Airport’s behaviour as evidence of monopoly power:

... [Perth Airport’s] proposal is an abuse of its position as a monopoly, unilaterally increasing the Group’s cost of using the airport by approximately 38 per cent over the next seven years and charging well above its cost of capital and building facilities. The excessive cost increases are an example of a monopoly blatantly profiteering from its customers and ultimately, Australian passengers. (sub. 86, p. 1)

Perth Airport refuted the 38 per cent cost increase, stating that this figure was ‘completely inconsistent’ with its last offer (sub. DR173, p. 3).

Qantas Group also stated that its proposition of dispute resolution through an ‘... independent, binding, expert determination on mutually agreed terms’ was rejected by Perth Airport (sub. DR115, p. 8). Qantas Group argued that this demonstrated that airports do not agree to independent arbitration under the current framework for commercial negotiations.

These legal proceedings were ongoing at the time the Commission was finalising this inquiry report.

4.3 Good faith conduct in the negotiation process

A systematic or persistent lack of good faith conduct by an airport operator in negotiations may indicate the exercise of market power. An airport operator that is exercising its market power could make take-it-or-leave-it offers; deny (or credibly threaten to deny) access to services; or refuse to share sufficient information in a timely manner.

Limited evidence of take-it-or-leave-it offers

An airport operator making take-it-or-leave-it offers could signal the potential exercise of market power, if negotiating parties are compelled to accept those offers.

Some airline participants stated that airport operators adopt a take-it-or-leave-it position during negotiations (A4ANZ, sub. 44; Qantas Group, sub. 48; Rex, sub. DR108; Virgin Australia Group, sub. DR142). Airline participants identified a range of evidence that they considered to constitute take-it-or-leave-it offers.

Take-it-or-leave-it offers can come in various forms. In some cases, an airport will be unwilling to budge at all on an element of its pricing (e.g. the rate of return or a capital expenditure project) or certain non-price terms of access. In other cases, the airport may be willing to shift somewhat, but ultimately the airline will be forced to accept unreasonable terms. (Virgin Australia Group, sub. DR142, p. 7)

Other evidence provided to the Commission related to:

- the negotiating behaviour of the airport. Qantas Group cited Perth Airport's refusal to support an Auckland–Perth–Johannesburg flight from its preferred terminal (sub. DR115). Perth Airport countered that a 2016 agreement with Qantas Group precluded the operation of additional routes from the same terminal (sub. DR173). Qantas Group also cited unreasonable offers and the subsequent legal action regarding unpaid charges that was filed by Perth Airport as evidence of take-it-or-leave-it behaviour (discussed in box 4.1 above) (sub. DR115)
- a specific aspect of an offer or contract. Airlines for Australia and New Zealand (A4ANZ) highlighted unfavourable contract clauses as evidence that airlines are required to accept airport operators' take-it-or-leave-it offers (sub. DR106). The contract clauses limit an airline's involvement in a declaration application under the National Access Regime
- an insufficient rationale for an offer. Examples typically related to cost estimates for a component of the service offer, such as security or capital costs, which airlines considered to be excessive (A4ANZ, sub. DR106)
- the rate of return on assets (discussed further in chapter 5) sought by airports during negotiations. Qantas Group argued that airport operators sought rates of return above a reasonable level, based on a sample of 12 monitored and non-monitored airports with:

... all of them initially targeting rate of returns between 10 and 15% (pre-tax nominal WACC). These inflated return targets indicate widespread monopolistic 'take it or leave it' behaviour by Australian airports which also prolongs airport negotiations. (sub. 48, p. 13)

The operators of the monitored airports stated that they do not make take-it-or-leave-it offers (Brisbane Airport, sub. DR109; Melbourne Airport, sub. DR107; Perth Airport, sub. DR173; Sydney Airport, sub. DR112). The ability of airport operators to offer take-it-or-leave-it contracts is constrained by the terms of their leases with the Commonwealth, which require airport operators to supply services to air transport operators,

with limited exceptions (chapter 1) (AAA, sub. 50; Melbourne Airport, sub. 33). Monitored airports also stated that they are unable to make offers on a take-it-or-leave-it basis as they:

- face countervailing power from airlines. This power could prevent an airport operator from making take-it-or-leave-it offers or allow an airline operator to reject these offers (Brisbane Airport, sub. 38; Melbourne Airport, sub. DR107; Sydney Airport, sub. 53)
- incorporate agreement terms at the request of airlines, such as service concessions or other bespoke terms that are specific to the needs of a particular airline (Brisbane Airport, sub. 38; Sydney Airport, sub. DR112)
- provide information on the offer, including through the use of the building block model (BBM) for determining airport charges, and other information on proposed airport investments (Brisbane Airport, sub. 38; Perth Airport, sub. 51)
- seek a rate of return in negotiations that is commensurate with the level of risk associated with airport operations and investment. Risk sharing in current airport–airline agreements is discussed in section 4.4 below.

Some take-it-or-leave-it examples were in relation to offers at regional airports (A4ANZ, sub. 44, sub. DR106). A4ANZ cited a 2017 AAA survey that identified that fewer than half of regional airports consult with airlines prior to ‘... major capital works entailing increased airport charges’ (A4ANZ, sub. 44, p. 13). A4ANZ further noted:

This behaviour was illustrated recently by a regional airport giving airlines three months’ notice of a 5.7% increase in head tax, on the back of a 12.8% increase only three years prior. This is hardly isolated, or indeed the worst behaviour, as A4ANZ notes that one regional airport recently attempted to increase their head tax by 22% with only two weeks’ notice to airlines, with another attempting to effectively double their head tax with minimal notice. (sub. 44, p. 13)

Regional airports often offer simpler terms of access compared with monitored airports, and in some cases, these offers may only entail scheduled charges. Such offers may reflect the straightforward nature of services provided by many regional airports, rather than a take-it-or-leave-it offer *per se*. As noted in chapter 3, regional airports are unlikely to have market power given that many regional airports run at a loss, and others that turn a profit face constraints on the exercise of any market power.

Not all take-it-or-leave-it offers constitute an exercise of market power. In some cases, bilateral negotiation is not practical and it can be common for a party to make take-it-or-leave-it offers to reduce the transaction costs of dealing with a large number of counterparties — discussed further in the context of negotiations with landside access operators in chapter 6. Unwillingness to negotiate on specific aspects of the service offer is not in itself evidence of exercise of market power where, for example, an airport operator needs to balance competing demands from different airport users to support efficient whole-of-airport operations.

On balance, the evidence provided to the Commission does not indicate that airport operators make take-it-or-leave-it offers to airlines *and* that airlines are compelled to accept them. Examples from participants indicate the significant bargaining power of both airline and

airport operators in negotiations. The Commission has heard of instances where airlines have negotiated an agreement that is more favourable than the starting offer — evidence which is not characteristic of a take-it-or-leave-it offer.

Parties adopt a range of tactics but typically avoid service disruptions

Airports use tactics to prompt an outcome but can rarely deny access to services

An airport operator could exercise its market power over airport users in negotiations if it were able to deny, or credibly threaten to deny, access to airport services. However, as noted above, airport operators are only able to deny access to aeronautical services in very limited circumstances. They can instead use other strategies to press for a favourable negotiated outcome. Airline participants provided examples of airport operator's behaviour that could be considered to lack good faith, including:

- public statements or complaints reported in the media. For example, Qantas Group identified that Townsville Airport ‘... ran a poster campaign stating [the airport’s] \$80 million redevelopment was possible for “less than a cup of coffee” for passengers’, and that this campaign was ‘designed to publicly pressure Qantas Group’ to reach an agreement on the proposed terminal redevelopment (Qantas Group, sub. 48, p. 16)
- obstructive operational tactics. For example, A4ANZ highlighted examples of airport operators’ behaviour that was ‘... designed to create operational disruptions and/or brand damage to force airline management to reach agreement ... including: with no forewarning, blocking the entrance to an airport lounge with chairs, [and] switching off Wi-Fi access in a lounge’ (A4ANZ, sub. 44, p. 29)
- unilateral behaviour. For example, Qantas Group stated:

[F]ollowing a negotiation dispute with Melbourne Airport, Qantas Group’s invitation to attend Quality Control meetings where service standards at the terminal were to be agreed, was unilaterally rescinded. Qantas is the largest user of this facility and lack of input threatens the customer proposition at Melbourne Airport. Poor negotiating behaviour was also demonstrated when Melbourne Airport warned Qantas Group that if their Aeronautical Services Agreement terms were not agreed, Qantas Group ran the risk of ‘being left behind’ on terminal redevelopments. (sub. 48, p. 23; Qantas Group, pers. comm., 23 January 2019)
- lobbying governments or local political representatives, for example, in the dispute between Regional Express (Rex) and King Island Council (box 4.2). Airlines have used similar tactics.

Box 4.2 Rex services to King Island

King Island is located off the north–west coast of Tasmania and has a population of about 1600. Passengers access King Island using either regular public transport (RPT) flights or charter aircraft. In 2017, the council-operated airport had over 43 000 RPT passenger movements and 11 000 charter passenger movements (King Island Council 2018a). Regional Express (Rex) is the only airline to provide flights to Melbourne Airport (King Island Council, sub. 26).

In July 2018, King Island Council (KIC) announced that the airport made a loss of \$470 000 in 2017-18. KIC announced increased charges to stem financial losses, and introduced a user pays model to move toward operating cost neutrality (King Island Council, sub. 26). KIC introduced a passenger charge of \$7.50 per passenger per movement (including GST) and increased landing charges from \$23 to \$27.50 (including GST) per tonne maximum take-off weight. KIC had attempted to increase charges in the two years prior, although ‘significant lobbying by the airlines and/or their supporters on the Island resulted in the proposals [fee increases] being rescinded by Council before coming into effect’ (King Island Council, sub. 26, p. 2).

The increased charges sparked a war of words between Rex and KIC. Rex stated that it had not been consulted on the increased charges and accused KIC of ‘lies’, ‘fabrication’, ‘defamatory statements’, ‘scurrilous accusation’ and ‘deliberately xenophobic statements’ (Rex 2018c, p. 1). KIC accused Rex of ‘corporate bullying’ and ‘a heavy-handed attack, with a view to dictating commercial arrangements to our remote Island community’ (King Island Council 2018b, p. 1). Rex subsequently cancelled 30 per cent of its services to King Island.

KIC requested assistance from the Tasmanian Government to resolve the dispute. It stated that Rex’s schedule changes affected tourism operators and that media releases from Rex had damaged the reputation of King Island as a tourist destination (King Island Council, sub. 26). In September 2018, KIC, Rex and the Tasmanian Government reached a resolution, with services and negotiations recommencing (King Island Council and Rex 2018). In October 2018, Rex announced it was reducing services again, with the Rex Executive Chairman stating that ‘[t]his very marginal route has consumed too much management effort and I have directed my staff to no longer entertain any more discussions with KIC or with any intermediaries’ (Rex 2018d, p. 2). Subsequent media reports indicate that the parties recommenced negotiations, with ‘amicable discussions’ and the reinstatement of previously cancelled services (Maloney 2019).

Airlines can delay negotiations, even when agreements have expired

As discussed in section 4.1 above, airlines can have incentives to delay negotiations and dispute new agreements or investments, particularly if it could threaten their incumbency. Prior to the Commission’s draft report, operators of a number of airports, including Perth, Adelaide, Darwin, Alice Springs and Townsville told the Commission that they did not have agreements in place with Qantas Group as the previous agreements had expired (Adelaide Airport, sub. 32; NTA, sub. 8; Perth Airport, sub. 51; QAL, sub. 23). At the time the Commission was finalising this report, Qantas Group had not signed an agreement with the operators of Perth, Adelaide and Townsville airports (Adelaide Airport, pers. comm., 5 June 2019; Perth Airport, pers. comm., 5 June 2019; QAL, pers. comm., 5 June 2019). Qantas Group is expected to sign agreements with Northern Territory Airports at Darwin and Alice Springs airports at the end of June (NTA, pers. comm., 7 June 2019).

Airlines can pay existing (or sometimes lower) charges and continue to access airport services if an agreement has expired and parties have not yet reached a new agreement.

- Northern Territory Airports commented that Qantas Group refused to negotiate new long-term price agreements and continued to pay charges at the level of the expired agreements at Darwin and Alice Springs airports. Northern Territory Airports stated that Qantas Group refused to pay price increases ‘... on the basis that it does not pay charges it does not agree to’ (sub. 8, p. 3).
- Perth Airport commenced legal action against Qantas Group to recover what it stated are unpaid charges, given a divergence between the parties on what constitutes reasonable charges following the expiry of the previous agreement (box 4.1).
- Airlines other than Qantas have previously refused to pay charges at the level determined by airports. The Commission’s 2011 inquiry into the *Economic Regulation of Airport Services* identified examples of this behaviour by Rex at Sydney and Melbourne airports (PC 2012a).

Ultimately, as discussed in section 4.1 above, both parties have an incentive to reach an agreement, particularly with demand growth requiring new investments.

Airlines can threaten to reduce services as their capital is more mobile

Airlines have more mobile capital than airports. The Australian Airports Investors Group stated that ‘[u]nlike their airline customers, airports’ assets are large in scale, fixed and immobile, resulting in exposure to a broad range of risks, including demand risk’ (sub. 20, p. 4). Airport investments are dependent on the behaviour and decisions of airlines which can ‘... control their capacity, i.e. aircraft, by size and frequency of operations, and have done so in the past’ (Brisbane Airport, sub. 38, p. 14). Karratha Airport noted that the relative mobility of airline assets affords bargaining power to airlines, particularly at regional or smaller airports:

We have little or no influence over the policies and network decisions of large airlines with significant market power who possess movable assets that can be deployed to other airports either if the services are not viable or new markets open up. The airport does not have this luxury and needs to make sure the asset is self-sustaining and provides a level of service expected by the community. (sub. 12, p. 2)

Airlines’ capital mobility means that they may be able to credibly threaten to reduce demand for an airport’s services. In practice, withdrawal of services on certain routes is more likely to occur at regional airports than at a monitored airport (chapter 3). For example, Rex withdrew services on the Mildura–Sydney route given what it described as ‘exorbitant’ charges (sub. 63, pp. 7–8). The airline stated that it redeployed resources to Griffith as part of a five-year agreement with Griffith City Council, although Rex maintains flights to Mildura from Melbourne and Adelaide. Other factors also influence an airline’s decision to alter its capacity on a route, such as network coverage, fuel costs, passenger demand and availability of aircraft and crew.

Threatening to reduce services, and the ability to carry out that threat, means that Qantas Group, Rex and Virgin Australia Group can have countervailing power at airports. A threat will be more credible if an airline has previously acted to reduce services (at this or another airport) or has otherwise signalled it is prepared to take a strong negotiating stance.

Airports share information and consult, albeit to varying degrees

Negotiating agreements is information intensive and the extent of information sharing can influence parties' bargaining power (Muthoo 2000). An airport operator that refuses to provide timely and relevant information may be exercising its market power. The Commission has considered the quality and type of information that airport operators provide to airport users, as well as the extent of consultation undertaken with users.

The quality and type of information shared can vary

The *Aeronautical Pricing Principles* state that commercial negotiations should include open and transparent information exchange. The extent of information provided by airport operators varies depending on the scope of the agreement. Typically, airport operators provide information on:

- aeronautical charges, which are often 'built up' using a BBM, albeit to varying degrees (discussed further in section 4.4)
- capital investment plans, including for example, terminal designs, passenger and air freight forecasts, investment rationale and forecast capital and operating costs.

Airlines also share information, such as proposed route changes, expansion plans or service use forecasts. Demand forecasts are a particular point of contest and the AAA has argued that airlines could share more detailed forecast information (sub. 73).

Airline participants told the Commission that there are occasions where airport operators have refused to provide information to assess the airports' charging and investment proposals, and that this can delay reaching an agreement (A4ANZ, sub. 44). Virgin Australia Group noted that the '... quality and timeliness of information disclosure by most major airports falls well short of what might be expected in a commercial negotiation where bargaining power is evenly matched' (sub. DR142, p. 7). Virgin Australia Group highlighted an example of an airport that provided only limited information on access charges, leading to a delay in negotiations.

Airline participants stated that they require specific information to make decisions regarding proposed airport investments, including their rationale and scope, the links to improved service outcomes and estimated capital costs (A4ANZ, sub. 44; BARA, sub. 42; Virgin Australia Group, sub. 54). BARA stated that the information provided by airport operators on proposed investments '... is considered well below that expected by the Australian Government for the level of cost sought for proposed infrastructure projects' (sub. 42, p. 25).

It advocated for airports to provide more detailed investment proposals, including cost–benefit analysis or business cases, depending on the size of the investment.

In contrast, the AAA noted that ‘... the information provided to airlines by major airports in Australia is broadly consistent with the information [the International Air Transport Association] suggests should be provided’ (sub. 73, p. 9).

Some airport operators have taken steps to improve transparency and access to information. For example, Perth Airport provided information to airlines (and others) to assess investment proposals, charges and other terms as part of its latest negotiations through a publicly accessible website. This information included:

- an indicative 10 year capital expenditure plan, with project descriptions and rationales
- 10 year forecasts of passenger numbers and operating costs
- the opening aeronautical asset base used to determine charges, with information on additions, depreciation, indexation and reallocation of assets between aeronautical and non-aeronautical services
- the methodology of proposed pricing models and assumptions adopted, and the proposed weighted average cost of capital (Perth Airport, sub. 51, sub. DR173).

This approach did not receive unanimous support from the parties that negotiate with Perth Airport. Qantas Group identified that the information provided was insufficient to assess the proposed capital expenditure and operating costs.

These omissions and refusals to give reasonable and necessary information have made it impossible for airlines to complete their own cost/benefit assessments and determine if airport proposals were the most cost-effective solution for travellers. (sub. DR115, p. 22)

BARA stated that public information provision is not sufficient to supplant consultation through the negotiation process. Following feedback from BARA, Perth Airport agreed to ‘... meet with international airlines to gain insights into their service needs’, and has developed new information and service proposals as part of the negotiation process (BARA, sub. DR92, pp. 7–8).

Airline participants and the Australian Competition and Consumer Commission (ACCC) argued for additional information disclosure in negotiations in order to improve the bargaining position of airlines — particularly smaller airlines (A4ANZ, sub. DR106; ACCC, sub. 59; Qantas Group, sub. DR115; Virgin Australia Group, sub. DR142). Reform proposals are explored further in chapter 9.

Airports consult, but airlines seek improvements in processes

Information exchange occurs through consultation between airports and airport users. All of the monitored airports have processes in place for consultation and engagement with airlines,

in addition to master planning consultation requirements (chapter 1). Most agreements with airlines also require airports to consult prior to undertaking major capital investments.

Some airport operators have introduced forums for ongoing consultation and engagement with airport users. For example, as part of its latest Aeronautical Services Agreement, Melbourne Airport created a Capital Consultation Group to facilitate collaboration and communication with airlines. It also established a Quarterly Consultation Forum to review service quality issues and share data on on-time performance with its airline customers (AAIG, sub. 20; Melbourne Airport, sub. 33). However as noted above, Melbourne Airport excluded Qantas Group from participating in Quality Control meetings until an agreement was reached for aeronautical services (Qantas Group, sub. 48, pers. comm., 23 January 2019).

Some inquiry participants raised concerns regarding the lack of consultation between airports and airport users during the negotiation process (A4ANZ, sub. 44; AFIA, sub. 67; Andrew's Airport Parking Group, sub. 30; BARA, sub. 42; Qantas Group, sub. 48) (chapter 6). Some participants noted that regional airports did not undertake adequate consultation, and that there was insufficient engagement on proposed capital works or increases to aeronautical charges (A4ANZ, sub. 44; Virgin Australia Group, sub. 54). The Commission agrees that engagement processes at regional airports could be improved and is proposing the adoption of an asset management framework to help build the capability of local councils in managing airport infrastructure and to address issues of user engagement (chapter 10).

Commercial negotiation processes are challenging but workable

Negotiating agreements for airport services is challenging — it is time-consuming, resource intensive and costly, and the argy bargy between airports and airlines sometimes plays out in the media (A4ANZ, sub. 44; Qantas Group, sub. 48; Virgin Australia Group, sub. 54). A challenging process does not necessarily indicate that airport operators are systematically exercising their market power to the detriment of the community. While threats, rhetoric and leveraging media attention are commonplace between some parties, ultimately airports and airlines have incentives to reach an agreement, especially given the need for new investments in aeronautical infrastructure to meet demand growth. A contested commercial negotiation process is not unique to aviation and occurs in other industries.

The negotiation process can be lengthy — some five-year agreements have taken three years to negotiate. However, the time taken to negotiate an agreement does not necessarily indicate an imbalance of bargaining power — what parties might consider reasonable for negotiating one agreement may not hold for another. For example, based on a small number of agreements with Brisbane Airport, agreements that took over a year to negotiate typically related to investments in aeronautical infrastructure, involved multiple parties, or were for agreements of five or more years in length. Other agreements were negotiated more quickly. The most recent terminal services agreements at Brisbane Airport (in force from January

2019 to June 2023) generally took 7 months to negotiate acceptable commercial terms with Virgin, BARA and other international airlines that are not members of BARA (Brisbane Airport, pers. comm., 18 January 2019).

Proposed principles could improve current negotiation processes

Airports have not systematically exercised their market power in the negotiation process, although this does not mean these processes cannot be improved. Airlines have called for the introduction of compulsory arbitration under a negotiate-arbitrate framework, discussed further in chapter 9. Both airport and airline participants have expressed support for a set of negotiating and contracting principles in order to reduce the transaction costs associated with the negotiation process (box 4.3) (AAA, sub. 73; BARA, sub. 42; Bush, sub. DR93; Sydney Airport, sub. 78).

Box 4.3 **Negotiating and contracting principles**

The Australian Airports Association, Board of Airline Representatives of Australia and Sydney Airport proposed that the Australian Government (through the Department of Infrastructure, Transport, Cities and Regional Development) bring together airport and airline stakeholders to develop and endorse principles for negotiating and contracting. Participants had different views on the scope of guidance, raising five potential aspects.

- Standardised ‘boilerplate’ clauses — including guidance on the non-service ‘elements of an acceptable agreement’ and removal of some ‘unfavourable’ contract terms.
- ‘Good faith’ bargaining behaviour — including requirements for consultation and information sharing, where the scope of information disclosure includes expenditure, revenue, allocation methodologies and activity forecasts, among other things.
- Investment and services proposals — incorporating requirements for the use of service performance indicators and cost–benefit analysis to better link proposed investments with service outcomes.
- Service quality improvements — participants proposed guidance on, for example, pricing for different service outcomes, timeframes for service availability, discounts for delays in aeronautical and terminal services and other measures to promote genuine financial accountability adopted by airport operators. Implementing Recommendation 9.5 would provide a forum for the Australian Competition and Consumer Commission to work in consultation with airport and airline stakeholders to develop updated service quality indicators (discussed further in chapter 9).
- Rate of return — airline participants supported regulatory guidance on the rate of return parameters based on relevant industry benchmarks, although airport operators did not.

Sources: AAA (sub. 73); BARA (sub. 42); Bush (sub. DR93); Sydney Airport (sub. 78).

Inquiry participants held different views on the scope and design characteristics of the principles in their submissions and in consultations with the Commission, including:

- the appropriate roles and responsibilities of different parties. Participants shared different views on the need for government involvement, and the relevant parties that should

participate, such as industry associations or operators of airports and airlines of different types, such as regional airports

- the applicability of the principles to different disputes. For example, disputes that occur ‘in contract’ with an existing agreement in place, or disputes where a party did not support the establishment of the principles
- how to enforce compliance with the principles and whether the principles should be binding. Some participants suggested that the principles could be legislated or that parties’ compliance with the principles could be assessed in a future Productivity Commission review
- the mechanism to design and agree on the principles. All parties emphasised the importance of consultation as part of any process to establish the principles, with some parties proposing roundtables or workshops.

Efforts by airline and airport operators to enhance the negotiation process through a set of agreed principles could improve efficiency in some cases. BARA has identified that there is scope for a greater range of performance-related incentives for airports in future agreements (sub. DR92). Agreements that include, for example, rebates that more closely reflect the costs borne by airlines due to an airport’s failure to meet service standards would align with international developments and best practice guidance (ACCC 2017a; IATA 2017a). However, a push by airlines to set a guideline weighted average cost of capital through this process would be an unhelpful development and could risk the introduction of ‘backdoor regulation’ (Bush, sub. DR93, p. 5).

The Australian Government could facilitate the development of negotiating and contracting principles, if this is the preference of parties. However, this process does not necessarily require a role for government — industry-led measures could improve information sharing and establish standard contract clauses. Government should balance any involvement with the potential risk that prescriptive advice or sanction of outcomes could impede negotiation flexibility or — at worst — hinder rather than help progress toward commercially negotiated outcomes. Parties should also have regard to potential ACCC authorisation requirements or other guidelines on anticompetitive conduct should they choose to proceed down this path.

4.4 Negotiation outcomes

The Commission has examined a number of aspects of commercially negotiated outcomes to assess whether agreements have resulted in:

- charges that are set above the long-run average cost of provision — the minimum an airport operator can charge to ensure it remains viable over time and a benchmark for economic efficiency (chapter 2)
- inefficient investment by airport operators
- risks that are disproportionately borne by airport users

-
- clauses that seek to unreasonably constrain a party's behaviour.

Charges are negotiated based on a model of airports' expected costs

An airport operator exercising its market power may seek to negotiate agreements that set aeronautical charges above the long-run average cost of provision (chapter 2). The Commission has assessed aeronautical charges and other indicators of the monitored airports' operational and financial performance in chapter 5. This section focuses on the features of commercial negotiations that affect charges.

Monitored airports often use a BBM as a starting point for determining their aeronautical charges (AAA, sub. 50). A BBM determines charges by 'building up' an airport's expected costs, such as capital costs, operating costs and tax liabilities (PC 2012a). The extent to which airports use the BBM in negotiations varies. Canberra Airport noted that a commercial agreement with Qantas Group for the terminal development in 2005 did not use a BBM (sub. DR169). Sydney Airport commented that:

The airlines generally like us to share a building block model to start their negotiations. What we don't go and do is agree the elements of the building block as part of the pricing arrangements. So we generally share a financial model. It sets the basis for the negotiation from the airport side. The airlines get access to that and can use that as the basis for their discussions as well. So I'd say it's a springboard, but we pretty much agree a price, a price path and an investment profile. Outside of that, there's no agreement on the elements of the building block. (trans., p. 226)

Both airline and airport participants noted a range of benefits and limitations of adopting a BBM. Airport operators noted, for example, that the BBM allows parties to assess changes in costs over time, given that industry use of the approach predates privatisation (Brisbane Airport, trans., p. 241). Airlines were generally in favour of the continued use of a BBM in negotiations, but also identified limitations with the approach. Qantas Group noted that:

... it's essential to use that [building block] model. In markets around the world ... in other industries, in Australia that model is used. We think it's a critical statement that we should use as an industry. We would say that we don't think the model has been consistently used over time and that's where the challenge is; that's what we think needs to be addressed. (trans., p. 273)

Airline participants also called for further transparency of costs and consistency of information to support pricing proposals across airports (IATA, trans., p. 511; Qantas Group, sub. 48; Virgin Australia Group, sub. 54). Some airlines commented that in practice, airports could inflate BBM inputs to justify excessive charges (Virgin Australia Group, sub. 54). An airport operator could, for example, recover non-aeronautical costs from airlines by revaluing the opening asset base or by shifting the allocation of assets between aeronautical and non-aeronautical services (Virgin Australia Group, sub. 54).

Some components of the BBM are particularly contentious. Airlines typically request information, including underlying cost models and assumptions, which enables them to determine an airport's expected rate of return (A4ANZ, sub. 44; Qantas Group, sub. 48;

Virgin Australia Group, sub. 54). This has meant that in some cases, a negotiation over aeronautical charges has become a disagreement over an airport's expected rate of return. Security costs are a particular point of contest, as airports pass through costs to airlines to recover the charges from passenger airfares (box 4.4).

Box 4.4 **Negotiating security services at airports**

The provision of airport security services is a particular point of contention in negotiations between airports and airlines. Qantas Group stated that airlines have no choice but to accept unfavourable terms and conditions for security requirements. Airlines raised concerns about:

- the increasing scope of recoverable security costs including, for example, charging for services that are not specific to passenger security requirements and that benefit other non-airline users
- airports profiting from security services, by charging administration fees or earning returns on security assets
- the lack of consultation prior to changes in services or costs and limited transparency as to the cost of security services
- the lack of cost-effectiveness of security services, given limited incentive for airport operators to deliver minimum security requirements at the lowest cost with cost pass through to airlines. Regional Express (Rex), for example, raised concerns about security screening and associated charges at Dubbo Airport that were in excess of the minimum requirements for the aircraft size.

These concerns were refuted by the Australian Airports Association, which argued that:

- the scope of security cost recovery varies across airports, given differences in terminal infrastructure
- there are administration costs associated with maintaining compliance with security requirements, and additional overhead costs are in line with standard cost allocation methodologies. It noted that '[i]n some cases, capital equipment costs are treated like another part of the terminal's infrastructure' (AAA, sub. 73, p. 12)
- airline participants are involved in industry discussions with airport operators regarding security issues, as well as airport security committees at which representatives from airlines and government discuss potential changes in security regulation
- there are examples of airport operators passing on security cost savings to airlines, indicating that airport operators have incentives for cost reductions.

Ultimately, security services are akin to other airport services that are the subject of commercial negotiations between airport and airline operators — operators should set security charges in a manner that is consistent with the *Aeronautical Pricing Principles*. Both parties have incentives to deliver security services efficiently. Poor quality security services could lead to congestion, delays and customer dissatisfaction — all of which affect the performance and reputation of both airports and airlines.

Sources: A4ANZ (sub. 44); AAA (sub. 73); Qantas Group (sub. 48); Rex (sub. 63); Virgin Australia Group (sub. 54).

Some participants noted that use of a BBM is not essential in commercial negotiations. One asset manager with airport investments noted that it is '... not the be all and end all in either

regulation or the commercial world. It's rarely seen in the commercial world. And in the regulatory world, it's not ubiquitous' (HRL Morrison and Co, trans., p. 340). Bush noted that the BBM could conflict with an increased focus on service outcomes in commercial negotiations.

I can understand that they [the BBM] may provide a comfort blanket for commercial parties but they seem rather at odds with the service approach advocated by BARA and with where individual airports in a commercial environment should be seeking to focus their efforts. A more natural place would be for the commercial parties to be negotiating on a service/price basis, with airlines focussed on whether what they are being offered reflects value and where it does not how it can be improved, as opposed to second-guessing the airport's costs, including the contentious area of WACC. (Bush, sub. DR93, pp. 5–6)

A BBM may constrain airports from exercising their market power to set charges above the long-run average cost of provision. A BBM provides some transparency of the airport's costs that can assist airport users to assess the proposed charges and other terms of access. Some infrastructure regulators use a BBM to determine total allowable revenue for regulated firms and ensure that prices reflect the efficient long-run cost of provision. Use of this model indicates that airport operators consider it necessary to justify their prices during negotiations. Airlines are able to test each block of the model for reasonableness (Qantas Group, sub. 48). The BBM may also increase an airline's bargaining power during negotiations as information regarding an airport's costs could signal the minimum offer that an airport is willing to accept. The Commission has assessed whether the negotiated aeronautical charges at the monitored airports could be above the long-run average cost of provision (chapter 5).

Agreements reflect partnerships to deliver major investments

Airline participants identified inefficient investments in airport infrastructure and facilities as evidence that airport operators are exercising their market power (box 4.5).

Commercially negotiated agreements have underpinned significant long-term investment in aeronautical assets. Infrastructure Partnerships Australia stated that '... Australia's major airports have continued to invest significant capital, increase asset efficiency and innovate, while keeping infrastructure charges low and competitive' (sub. 58, p. 1).

Airports have undertaken substantial investment since the reforms to the regulatory regime in 2002. Total additions to aeronautical assets by the monitored airports exceeded \$8 billion over the past 10 years (ACCC 2019, p. 24). However, the value of the investment does not provide an indication of whether that investment has been efficient.

Box 4.5 Airlines' views on airports' investments

Airline participants commented that airport investments did not always meet airlines' needs, because the investment was excessive, inefficiently delivered, or not what was required (A4ANZ, sub. 44; BARA, sub. 42; Qantas Group, sub. 48; Rex, sub. 63; Virgin Australia Group, sub. 54). Several participants attributed this to poor consultation. For example, Virgin Australia Group stated:

Virgin Australia often finds itself in a situation where it has little choice but to enter into an agreement with the airport to fund an investment, even though we have not been provided with clarity around the necessity, scope or cost of the investment, and notwithstanding that the rate of return may be higher than we consider appropriate. (sub. 54, p. 8)

Qantas Group and Regional Express (Rex) stated that airports have incentives to 'gold plate' — to over-invest to increase the airport's asset base — and then recover costs from airlines.

These examples demonstrate that Australian airports can simply recover costs from airlines. Instead of supporting infrastructure that is fit-for-purpose and efficient, the current regulatory framework incentivises gold plating of airport infrastructure. (Qantas Group, sub. 48, p. 19)

Rex cited several cases where it considered councils had over-invested in regional airports, for reasons of 'prestige' or because of a 'build-it-and-they-will-come' investment approach:

Expansion of runways, taxiways and apron[s] to cater for potential larger jet aircraft that exceeds current and future requirements of the airport, again resulting in high depreciation and operational costs. Often this is driven by pie-in-the-sky wishful thinking by the council and the airline is left to pick up the bill when the initiative fails to bear fruit. (sub. 63, p. 5)

Airport operators told the Commission that, in some cases, they have altered infrastructure proposals in response to airline needs, and that this is evidence that they have not exercised their market power in commercial negotiations. Perth Airport noted that it accommodated aircraft-specific needs for the non-stop flight to London, where the airport:

... facilitated Qantas' particular needs to operate its 787 aircraft internationally from a pre-existing domestic terminal despite this not being the most efficient solution from a whole of airport perspective. (sub. 51, p. 6)

The Department of Infrastructure, Regional Development and Cities identified that Melbourne Airport's proposed third runway balanced the needs of multiple stakeholders:

It is reported airline engagement has heavily influenced the project scope and preliminary airspace design. Negotiated changes from the 2013 Master Plan have removed approximately \$250 million in construction costs. The scope agreed to date takes into account how airlines can best utilise a parallel runway system. Melbourne Airport's engagement with airlines has resulted in runway lengths, widths, taxiways and navigational aids being revised, demonstrating commercial collaboration and the influence of airline stakeholders to ensure major projects are adequate and cost-conscious. (sub. 40, p. 16)

Evidence that airport and airline operators have previously reached agreement for new investments does not indicate whether an airport operator has exercised its market power. A commercially negotiated outcome could still involve an airport exercising its market power

if, for example, an airport user has no choice but to accept what it considers to be a poor offer. The ACCC emphasised this in response to the Commission’s draft report:

ACCC experience across a range of different sectors has found that the mere fact of reaching agreement with a monopolist does not, in itself, indicate that market power is absent. (sub. DR158, pp. 10–11)

Whether these commercially negotiated outcomes are the result of airports’ exercise of market power in aeronautical services requires further consideration of airports’ operational and financial performance (chapter 5).

Risks are shared between airports and airlines

Both airports and airlines are subject to risks that affect their incentives and bargaining power in commercial negotiations, although these risks may be borne differently. Airline participants proposed that airports disproportionately shift risk to airport users through:

- rates of return that do not reflect the level of demand risk borne by parties
- agreements that use pre-financing for infrastructure investments.

Airline participants argue that these practices are attributable to airport operators exercising their market power (Qantas Group, sub. DR115; Virgin Australia Group, sub. DR142).

The share of demand risk borne by airports and airlines varies by agreement

Both airports and airlines are subject to demand risks, although the nature and scale of the risk varies depending on the party and the specific agreement in place. Airlines noted that they ‘... bear the risk of generating passenger and cargo demand, competition and external market factors’ (Qantas Group, sub. 48, p. 9). Airlines argued that airport operators seek to negotiate a rate of return that exceeds the airport’s level of risk exposure. Virgin Australia Group noted that:

Airports use the passenger volume forecast as the basis for pricing, and therefore have the ability to apply a conservative forecast to minimise exposure to downside risk. Airports can also ‘reset’ passenger volume forecasts each time that pricing is reset, thus protecting them from any risk associated with volumes not meeting expectations over the long term – to the extent that volumes fall short of expectations, the cost of this can effectively be passed on to airlines in the form of higher charges. In addition, to compensate them for any passenger volume risk during a pricing period, airports receive a relatively high weighted average cost of capital (WACC) (in comparison to regulated infrastructure). (sub. DR142, p. 8)

Airport operators face a different but related set of risks. They seek to mitigate the potential for stranded assets that can arise with changes in passenger demand (Brisbane Airport, sub. 38). As discussed in section 4.3, airlines have more mobile capital than airports. An airline, unlike an airport, can redeploy its assets on other routes in response to reduced passenger demand. For example, Qantas Group recently reduced the number of flights to

Darwin from Alice Springs and Perth (Smith 2019). Airlines also price discriminate and can lower airfares for certain passengers to stimulate demand. Airlines' downstream decisions therefore influence an airport's risk profile.

Some airport operators also argued that they assume greater volume risk with agreements that include per passenger charges compared with weight-based aircraft charges (Brisbane Airport, sub. 38). Regional airports noted that the demand risk borne by airports could be higher at airports that service smaller population catchments or fewer airlines (NTA, sub. 8).

Airports and airlines share risks for capital investments to support, for example, new airline technology or services. The introduction of the A380 is one example of parties' shared risk for infrastructure upgrades, with investments by both airports and airlines (chapter 1) (Qantas Group, sub. DR115).

The outcomes of any agreement are subject to uncertainty and risk — and this affects airports and airlines. Changes in demand that are outside the airport's control may mean that some investments appear to be above or below requirements only with the benefit of hindsight (chapter 2). However, this does not necessarily mean that an airport has exercised its market power. Nor does it mean that demand risks are, or should always be, shared evenly between the airports and airlines. The Commission previously noted that, although the post-global financial crisis demand shock was borne disproportionately by airlines, this did not indicate the exercise of airport market power.

Airlines had to protect their load factors and this helped insulate airports' revenues. The airlines' response would similarly have benefited fuel companies, catering services and the travelling public. (PC 2012a, p. 175)

An imbalance in exposure to demand risk is not unique to airports and airlines. In markets for other infrastructure services that involve large fixed upstream investments, such as gas pipelines, it is common for infrastructure owners to require customers to agree to take-or-pay contracts. In these contracts, a customer guarantees to pay for a future level of services, regardless of whether or not the customer uses them. This can significantly reduce the risk of large capital investments faced by the infrastructure owner. Surprisingly, no examples of take-or-pay contracts for airport services were identified. Qantas Group noted that airports had rejected previous proposals for fixed-volume contracts (sub. DR115).

Pre-financing is one mechanism available to share investment risk

Airline participants stated that pre-financing represents a form of unreasonable risk transfer from airports to airlines. Airports sometimes seek to finance investments by negotiating price paths that include investment costs *prior* to the infrastructure being operational, either through charges levied for a particular project or as part of the overall agreed price path.

Airline participants noted that these practices contribute to airline operators paying for investment that is not necessarily required for their operations (A4ANZ, sub. 44; Virgin Australia Group, sub. DR142). Virgin Australia Group raised concerns with airlines

financing projects — and sometimes, cost overruns for projects — prior to receiving the benefits of the infrastructure. In contrast, Bush argued that airlines benefit from using facilities paid for by past users (sub. DR93).

Pre-financing can be a reasonable mechanism to support efficient airport investment in some cases, particularly if major investments require sufficient cash flows. Some participants stated that pre-financing for large projects can reduce the overall capital costs compared with debt financing (AAA, sub. 50; Adelaide Airport, sub. 32). Bush argued that pre-financing is one mechanism to smooth the costs of airports' lumpy investment cycles over time, and is particularly relevant at capacity-constrained airports (chapter 2):

In such cases the excess demand that creates the case for capacity-enhancing investment means that there are likely to be underlying scarcity rents. Where airport charges are set through strict cost-based regulation or, under lighter handed systems, broadly in line with cost-based principles those scarcity rents tend to accrue to airlines rather than the airport. Were those rents to accrue to the airport then the arguments for specific pre-financing mechanisms would fall away. The financial impacts of congestion would then provide the airport with both the business case for, and the initial financing of, additional airport facilities. (sub. DR93, pp. 6–7)

Anticompetitive clauses in agreements affect both airports and airlines

Some agreements contain clauses that can protect the incumbency of an airline, or penalise airline involvement in a declaration application under the National Access Regime.

'No less favourable' clauses can potentially protect an airline's incumbency

Some agreements contain clauses that restrict an airport operator's ability to offer lower charges or other incentives to airlines other than the signatory airline. These 'no less favourable' clauses seek to limit competition in both domestic and international markets, and protect the incumbency of an airline that has negotiated these favourable terms (AAA, sub. 50). Agreements that contain 'no less favourable' clauses seek to prevent an airport from offering incentives like lower charges for new entrants or specific routes. Such clauses are not advantageous for an airport where it would otherwise benefit from securing an additional airline customer or higher passenger throughput, and could particularly affect the entry of new LCCs.

Clauses that penalise a declaration application could undermine the regime

Some agreements contain clauses that establish financial disincentives or loss of contractual rights if an airline is involved in a declaration application under the National Access Regime (box 4.6). Reducing the threat of declaration could potentially undermine the effectiveness of the regulatory regime (A4ANZ, sub. 44).

Box 4.6 **Clauses with consequences for airlines seeking declaration**

Airline participants noted that clauses with consequences for airlines seeking declaration were either proposed or present in current contracts.

- In several instances, airports successfully negotiated clauses that penalise or withdraw incentives if Qantas Group sought or became involved in a declaration. At least 4 of Qantas Group's current pricing agreements and incentive contracts with 2 major airports include these contract clauses. (Qantas Group, sub. 48, p. 23)
- Furthermore, A4ANZ is aware of airports proposing agreement clauses which create a financial disincentive or a loss of contractual rights if an airline lodged a declaration application or assisted/supported a third party in making a declaration application. This is another example of monopolistic behaviour that runs contrary to both the legislation and public policy objectives. The intent of Part IIIA of the *Competition and Consumer Act* (CCA) is that any business should have the ability to seek access on reasonable terms and conditions to essential facilities such as an airport, yet we see private monopoly infrastructure operators attempting to force their customers to forgo their rights in this regard. (A4ANZ, sub. 44, p. 23)
- One example of this is a clause proposed by one airport which gives the airport the right to terminate the agreement should the airline lodge (or support or be in any way involved in) an application for declaration under Part IIIA of the *Competition and Consumer Act 2010* (Cth) (CCA). For any party to seek the right to terminate an agreement because the other party seeks to exercise a statutory right is inappropriate and contrary to public policy. For a monopolist to do so is a clear abuse of market power. (Virgin Australia Group, sub. 54, p. 9)

As noted in section 4.3, A4ANZ stated the inclusion of such clauses reflect airport operators exercising their market power. Some airports justified these clauses on the basis that they prevent the use of the declaration process to undermine an agreement (Sydney Airport, sub. DR112). The airports argued that airlines could engage in regulatory gaming or cherry picking to have certain agreement terms changed, although it is not clear how an application to *declare* a service provides scope for cherry picking by the applicant.

The Commission considers that both types of (and any other) anticompetitive clauses should be removed from all agreements. The ACCC also supported the removal of these 'problematic' clauses (sub. DR158, p. 20). Chapter 9 outlines the Commission's recommended approach to deter the use of these clauses in agreements.

4.5 Are airports exercising market power through commercial negotiations?

The Commission is satisfied that, on balance, airports have not systematically exercised their market power in negotiations with airlines. Agreements support risk sharing between airports and airlines, and have underpinned significant long-term investment in aeronautical assets.

However, there has been a small number of instances of poor behaviour on both sides. Examples provided by participants typically related to a lack of good faith bargaining in negotiations for domestic aeronautical services. Both airports and airlines provided examples of behaviour that may lack good faith, including refusal to negotiate, threats, lobbying or

complaints to the media. The behaviour of airport and airline operators during the negotiation process indicates that both parties are capable of wielding their bargaining power and can result in commercial consequences for either party.

Challenging commercial negotiations are not unique to aviation. The conduct of negotiating parties may reflect divergent incentives and the inherent conflict of negotiations, rather than an exercise of market power *per se*.

Airports have not systematically exercised their market power in negotiations with airlines, but the negotiation process could still be improved. Both airlines and airports have suggested a need for a set of agreed negotiating and contracting principles, including standard contract clauses and performance incentives for airports. Parties could voluntarily pursue these principles through industry-led measures, or request that the Australian Government facilitate this process.

5 Performance of Australia's airports

Key points

- The Commission analysed three areas of airport performance to provide insights into whether airports are exercising their market power in aeronautical services, including:
 - operational efficiency — whether an airport provides aeronautical services that reflect efficient costs and input utilisation, and are of a quality that meets users' reasonable expectations
 - aeronautical revenues and charges — whether the prices of aeronautical services (as measured by revenues and charges) reflect efficient costs
 - profitability — whether an airport's returns are reflective of the cost of capital, accounting for the long-term nature of airport investments and operational constraints.
- Indicators of performance in each area were measured over time and compared with other airports, including overseas peers where relevant and comparable.
 - Sensitivity analysis using different samples of comparator airports verified that results were robust, with some exceptions noted.
- On balance, most indicators of operational efficiency (including costs and service quality), aeronautical revenue and charges, and profitability are within reasonable bounds. However, in isolation, some indicators of performance could be cause for concern.
 - Sydney Airport has relatively high returns, but this is less concerning in the context of land and regulatory constraints that have limited the growth of its asset base. Further, returns should be assessed over a reasonably long period of time. On that basis Sydney Airport's returns are not indicative of the systematic exercise of market power.
 - Melbourne Airport has relatively low costs and, on balance, good service quality compared with overseas airports but declining on-time performance. Its aeronautical charges are in line with overseas airports and its returns on aeronautical assets are not excessive.
 - Brisbane Airport has invested heavily in increasing international capacity. It has good service quality, low costs and low returns compared with the other monitored airports.
 - Perth Airport invested in terminal expansions during the resources boom. Although these expansions were supported by airlines at the time, there is now excess capacity, which has led to high operating costs and falling returns.
- High international charges at Sydney and Brisbane airports, Sydney Airport's profitability, and high operating costs at Perth Airport show that there is reason to remain vigilant.
 - Improvements to the monitoring regime to collect specific information on the costs and revenues associated with international services are required to assess whether charges for these services reflect the efficient cost of provision.
- Overall, the evidence does not suggest that the four monitored airports have systematically exercised their market power in a way that would justify significant change to the current form of regulation of aeronautical services at any of these airports at this time.

The purpose of this chapter is to assess airports' operational and financial performance to determine if their conduct and performance are consistent with the exercise of market power. This analysis informs the Commission's conclusions as to whether the light-handed regulatory regime for airports is effective, or if there is a need for change.

This chapter focuses on whether airports are exercising their market power in the provision of aeronautical services such as runways and terminal infrastructure. Other areas where airports have market power — car parking and landside access — are considered in chapter 6. The analysis concentrates primarily on Sydney, Melbourne, Brisbane and Perth airports (the monitored airports). These airports have significant market power, creating a *prima facie* case for regulatory intervention (chapter 3). Airports outside the monitoring regime, and in particular, regional airports, do not have significant market power (chapter 3).

5.1 Assessing airport performance

The Commission examined indicators of the monitored airports' operational and financial performance that could be consistent with the exercise of market power, including:

- operational efficiency — whether an airport provides aeronautical services that reflect efficient costs and input utilisation, and are of a quality that meets users' reasonable expectations
- aeronautical revenues and charges — whether the prices of aeronautical services (as measured by revenues and charges) reflect efficient costs
- profitability — whether an airport's returns are reflective of the cost of capital, accounting for the long-term nature of airport investments and operational constraints. Persistently high returns could indicate that airport operators are exercising their market power by setting prices above the efficient level, which could be either the long-run average cost of providing services or, in the case of exogenous capacity constraints, airport users' willingness to pay (chapter 2).

The Commission did not set benchmarks for individual indicators. Each airport has different circumstances, including investment cycles, so it is not practical (or sensible) to define a benchmark for each indicator that would signal an exercise of market power at each airport. Instead of comparing indicators with benchmarks, the Commission assessed indicators of airport performance over time, and relative to comparable airports in Australia and overseas, to determine whether the *indicator* could be consistent with the exercise of market power. It then assessed whether the *overall performance* of each airport in aeronautical services could be consistent with the systematic exercise of market power.

Some indicators of operational and financial performance at particular airports could be consistent with the exercise of market power — when taken in isolation. However, when taken as a whole the evidence does not suggest that airports have systematically exercised their market power to the detriment of the community (section 5.5).

In its draft report, the Commission found that aeronautical charges for international services are relatively high at Sydney and Brisbane airports. In response, Brisbane Airport stated that its international charges primarily reflect ‘... the significant lumpy investment in the International Terminal Building (ITB) expansion (both the building itself and the associated aprons) and runway since 2007-08’ (sub. DR109, p. 9). Sydney Airport said that its charges reflect the pricing structure that the Australian Competition and Consumer Commission (ACCC) determined in 2001 when it was privatised (sub. DR112). Nevertheless, without data on international and domestic costs, the Commission cannot verify whether international charges have moved in line with costs. A requirement for the monitored airports to provide more specific data on costs and revenues for international and domestic aeronautical services would enable greater scrutiny of performance in this area (chapter 9).

Service quality is a contested issue in terms of: the outcomes experienced by passengers and airlines; how it is incorporated into commercial agreements between airports and airlines (chapter 4); and how it is measured in ACCC monitoring reports. The Commission found in its draft report that the monitored airports performed well relative to overseas airports on measures of service quality as reported by passengers, but less favourably on measures reported by airlines. The Commission concluded that airports were performing relatively well on service quality overall, but some inquiry participants disagreed (for example, BARA, sub. DR92, sub. DR160; Boscutti, sub. DR163). The Commission acknowledges that methodological issues and biases can limit the robustness of quality of service ratings under the monitoring regime. Among other improvements, quality of service monitoring should be updated to emphasise indicators that reflect outcomes that are valued by airport users (airlines and passengers), drawing on the indicators that airports and airlines use in service level agreements (chapter 9).

Data used to assess airports’ performance

The Commission has used the best available and comparable data from several sources.

- Data from the ACCC monitoring reports were used primarily for trend analysis and for comparisons between the monitored airports. Caveats on the use of the ACCC data are noted in box 5.1.
- Data from the Air Transport Research Society (ATRS) were used for most of the comparisons made with overseas airports. The approach to select airports for international comparisons is described in box 5.2.
- Other data were obtained from sources such as the Bureau of Infrastructure, Transport and Regional Economics (BITRE), airport and airline reports and publications, and evidence provided in submissions to this inquiry and at public hearings.

A period of 10 years was used for time series analysis. While airport investments typically last longer than 10 years, it is sufficient to assess trends in performance without being overly influenced by short-term volatility. Further, this timeframe aligns with the availability of data on many key indicators in the ACCC monitoring reports.

Box 5.1 Limitations of ACCC data for analysis of monitored airports

Domestic terminal leases

Most terminals at the monitored airports are owned and operated by the airports, with airlines being charged for access. However, some airports have had domestic terminals operated exclusively by a single airline under a domestic terminal lease (DTL) arrangement.

The ACCC's monitoring role for aeronautical services only covers terminals owned and operated by the monitored airports. DTL costs and revenues are not included in figures specifically for aeronautical services, but are included in 'total airport' figures. Total passenger numbers also cover DTLs. This distorts results by significantly lowering aeronautical costs and revenues per passenger and should be taken into consideration when making comparisons between airports.

The DTLs at Brisbane and Perth airports expired in December 2018 and January 2019, respectively. As such, they are now subject to ACCC monitoring and will be included in the 2018-19 monitoring report. However, the DTL at Melbourne Airport (expiry date 30 June 2019), will not be included until the 2019-20 monitoring report. After that time there will be no comparability issues, except for historical trend analysis that covers a period during which different terminals were and were not operated under DTLs.

Objective quality of service indicators

The ACCC collects data on a range of objective quality of service indicators, usually expressed as ratios of the number of passengers to the number of a type of facility (such as the number of check-in desk, kiosk and bag-drop facilities). It is not always clear whether an increase or decrease in an indicator represents an improvement. For example, whether replacing check-in desks with a greater number of kiosk and bag-drop facilities represents an improvement in quality depends on airport users' preferences and the performance of each technology. Further, these objective indicators cannot capture improvements in quality that do not lead to an increase in the number of facilities (such as technological improvements) (Perth Airport, sub. DR114; Sydney Airport, sub. 53).

The ACCC also converts each objective indicator into a rating out of 5 to aggregate these indicators to form overall quality ratings. A rating of 3 is considered the average of the monitored airports for an objective indicator. Accordingly, an airport's rating could decrease, not because of any change at the airport itself, but because of an improvement in the average performance of other monitored airports (ACCC, sub. 59). Monitored airports also measure some indicators differently, which further limits comparisons between airports (ACCC 2013b).

Subjective quality of service indicators

The ACCC captures subjective quality of service indicators collected through surveys. These data can show whether service quality is meeting the current expectations of passengers and airlines. They are less useful for assessing long-term improvements because survey responses are more likely to reflect recent experiences and expectations, rather than improvements from past experiences.

Subjective responses also depend on who is being surveyed. For example, participants might be more likely to respond if they experience poor service quality, and passengers might not be able to distinguish between services provided by the airport and the airline, affecting their perception of airport service quality (Trischler and Lohmann 2018). The reliability of the ACCC's airline survey ratings could be affected by: low response rates (AAA, sub. 50; ACCC, sub. 59); the equal weighting of responses regardless of airline size (ACCC, sub. 59); potentially negative connotations in the survey (Brisbane Airport, sub. 38); and limited representation of airline employees (Sydney Airport, sub. 53). Stakeholders also noted the potential for airlines to be strategically motivated to give lower ratings (AAA, sub. 50; ACCC 2019; Trischler and Lohmann 2018).

Box 5.2 Airports used in international comparisons

For international comparisons of costs, input utilisation and revenues, the Commission primarily used data from the Air Transport Research Society (ATRS) annual global benchmarking report, which provides data for more than 200 airports across the world (ATRS 2018).

Airports which had either similar passenger demand, shares of international passengers, or similar sized aircraft were used in the Commission's analysis. Specifically, the samples included:

- airports with more than 10 million passengers, as these are at least as large as Perth Airport (the smallest of the monitored airports). This sample included more than 100 airports in total
- airports with 10 to 50 million passengers
- airports with more than 10 million passengers and less than 50 per cent international passengers, as the monitored airports have a relatively low share of international passengers
- airports with more than 10 million passengers and a relatively high number of passengers per aircraft movement on average, as the monitored airports typically service larger aircraft.

All samples include at least 50 airports. The exact number depends on the ATRS data available for each indicator. International comparisons of costs, input utilisation and revenues using all four samples are in appendix B.^a

For comparisons of aeronautical charges, the Commission used a different sample of airports, based on the airports that inquiry participants included in submissions. International comparisons of service quality are based on the airports included in global survey and rating programs.

Airports could also be placed in a sample based on the regulatory arrangements they operate under. The Commission did not examine samples of airports based on their regulatory arrangements in its analysis of airport performance, but drew on some analysis from submissions that did so for aeronautical charges.

^a Available online only from: www.pc.gov.au/inquiries/completed/airports-2019/report.

The ACCC stated that trend analysis of returns on assets cannot shed light on whether profits are consistently above an efficient level (sub. DR158). The Commission agrees that trends in returns on assets, in isolation, cannot be used to determine whether profits exceed an efficient level. However, trend analysis can reveal whether airports' profits have significantly increased or decreased since the previous monitoring report, which can form part of a broader assessment of whether airports have exercised their market power. A full assessment requires consideration of other indicators to understand both the level of profits and drivers of change in profits.

For overseas comparisons of monetary indicators, the Commission adjusted results by using purchasing power parity (PPP) (box 5.3). The sensitivity of results was tested using nominal exchange rate conversions.

Box 5.3 Purchasing power parity

The purchasing power parity (PPP) concept states that, in the absence of transaction costs and barriers to trade, identical goods or services will have the same price in different markets when converted to a common currency. In the markets for aeronautical services, if PPP holds, then similar services will trade at similar prices at airports throughout the world.

In practice, this does not occur. In a general sense, PPP may fail to hold when the general price level in one country relative to another country shifts, and the exchange rate is not able to adjust to compensate. A PPP adjustment corrects for fluctuations in the nominal exchange rate by determining an equivalent exchange rate so that, broadly, the same type of goods and services can be acquired for the same expenditure in both countries. Using a PPP rate facilitates international comparisons by removing price differentials that are due to nominal exchange rate fluctuations and focuses on those due to underlying differences such as technology or competition.

Caveats for international comparisons

Airports vary by size (among other things) (box 5.2) and operators structure their aeronautical charges, value their assets and measure service quality indicators differently — all of which can lead to difficulties in comparing airports' performance. Changes in reporting methodologies can also affect comparisons over time.

Airport and airline groups raised these issues. Airlines for Australia and New Zealand (A4ANZ) said that results of international comparisons should be interpreted with caution.

... given the unique characteristics of Australian airports (the high proportion of domestic travel, type of ownership, network connectivity, and variable hub characteristics), it is difficult to find appropriate international airports for meaningful comparison via [Data Envelopment Analysis] DEA or [Stochastic Frontier Analysis] SFA analysis; they are more likely to match other Australian airports. Attempts to assess efficiency or performance against international airports may therefore produce flawed results, to be interpreted with caution. (sub. 44, p. 26)

The Australian Airports Association (AAA) also noted that comparisons are difficult, but can still be useful as long as they are interpreted carefully.

... benchmarking is not a simple exercise. There are common issues with data availability and consistency. As well, determining a perfect set of comparable airports is a challenging task as there will always be inherent differences between airports. This, however, does not mean that there is no merit in benchmarking exercises; it means that the comparable airports chosen should be reasonably similar, but the differences between them and the implications of these differences should be noted. In addition, the differences in structure, operation, regulation, subsidy, etc. should be taken into account when interpreting the overall results. (sub. 50, attachment 2, p. 11)

The Commission agrees that data limitations and other factors make comparisons of airports across different countries challenging. The additional insights from international comparisons outweigh the limitations, provided that the analysis and interpretation is done

with caution. Sensitivity analysis using different samples of comparator airports (box 5.2) supports the overall qualitative findings on costs, input utilisation and revenues.

Feedback on the Commission’s approach to assessing performance

In response to the draft report, airport participants were generally supportive of the Commission’s approach to assessing airport performance and its conclusions (for example, AAA, sub. DR94). However, others were critical of some parts of the analysis (including A4ANZ, sub. DR106; ACCC, sub. DR158; Frontier Economics, sub. DR117; IATA, sub. DR116; Qantas Group, sub. DR115). The main areas of concern were:

- the Commission’s analysis of aeronautical services separately from non-aeronautical services to assess whether airports are exercising their market power. Some airline participants suggested that airports’ performance should be assessed as a whole, with aeronautical and non-aeronautical revenues, costs and profits considered together
- the suitability of return on assets to measure profits rather than an internal rate of return, as return on assets uses accounting data
- limitations from international comparisons, including the choice of comparator airports.

Airports’ performance in aeronautical services was examined separately from non-aeronautical services in the Commission’s analysis. An approach that assesses aeronautical and non-aeronautical services together would obscure important detail. Analysing whole-of-airport performance could reveal whether an airport’s total profits exceed some benchmark, but would not show whether profits could be attributed to the exercise of market power in aeronautical services specifically. The Commission would not be able to identify areas of concern or recommend targeted regulatory solutions if it had taken the whole-of-airport approach (chapter 9).

Return on assets measures are standard for the building block approach used for regulated utilities, such as electricity and gas. The ACCC has, over many years, reported data on airports’ return on aeronautical assets (ROAA), calculated using a methodology that is open to external review. The accounting data for the monitored airports are no longer subject to revaluations, meaning that they are becoming more reliable to use for the purposes of analysing trends in return on assets over time. An alternative approach is to use an internal rate of return (IRR). A4ANZ stated that IRR is ‘... the most theoretically appropriate measure of excess returns’ (sub. DR106, p. 28). While that approach does have merit from a theoretical perspective, it is subject to significant practical difficulties, including the use of several assumptions that can influence results (section 5.4).

A4ANZ stated that there were significant limitations from the Commission’s operational efficiency analysis which compared Australian and overseas airports, given the differences in ‘... size, mix of domestic v international passengers, number of airlines served, and hub characteristics’ (sub. DR106, p. 33). The Commission used samples of airports based on some of these characteristics in its sensitivity analysis of different indicators (for example,

size and passenger mix — box 5.2). This analysis verified that the results were robust, with some exceptions noted.

The Commission considered a range of indicators and evidence from participants including costs, charges, service quality, investment and productivity. The approach used is practical and broadly similar to that of previous inquiries. An array of information has been collected and analysed, and evidence from submissions has been used to come to an overall conclusion regarding the exercise of market power at the monitored airports.

5.2 Operational efficiency

An airport operator could operate inefficiently by allowing its costs to rise unnecessarily, providing a quality of service that is not in line with users' reasonable expectations, or underinvesting in infrastructure (chapter 2).

Australian airports generally argued that they invest in new technology, which has allowed them to operate more efficiently.

- Sydney Airport introduced software to automatically create gate allocation schedules and identify risks of delays (sub. 53, sub. DR181).
- Perth and Gold Coast airports are using swing gates (Perth Airport, sub. 51; QAL, sub. 23).
- At Townsville Airport, future redevelopment plans include the installation of innovative check-in and automatic bag-drop facilities (QAL, sub. 23), which are increasingly being used in other airports.

Airline participants argued that operational efficiency is declining.

- A4ANZ stated that rising operating costs per passenger provide evidence that airports have become less efficient, especially in light of technological innovations and growing passenger numbers over the past decade (sub. 44).
- Qantas Group said that 'inefficient investment decisions by Australian monopoly airports have increased passenger costs over the past decade' (sub. 48, p. 19).
- A4ANZ stated that airports could operate more efficiently by utilising their existing infrastructure better through modest increases in operating costs, rather than creating additional infrastructure (A4ANZ 2018).
- Qantas Group said that 'ACCC price and quality monitoring data shows service quality levels for passengers at the monitored airports are stagnant or declining' (sub. 48, p. 6). Other participants made similar comments (A4ANZ, sub. 44; Virgin Australia Group, sub. 54).
- Airlines said that they themselves experience higher costs and reduced operational efficiency, with this '... stemming from the airport operator not adequately responding to growth in passenger volumes and flights above that forecast' (BARA, sub. 42, p. 32).

The Commission analysed evidence on financial costs, utilisation of infrastructure and service quality at the monitored airports. The investment cycle and passenger growth can affect these measures, but not always in the same way. Infrastructure investment reduces some measures of performance, for example, through an increase in total costs and an initial fall in input utilisation. However, service quality could increase because of lower congestion and associated improvements in airline and passenger experiences. This highlights the need to consider various indicators collectively to assess overall operational efficiency.

Costs have increased at most of the monitored airports

In the ACCC monitoring reports, costs are recorded separately for both aeronautical services and for the airport as a whole. Specific cost items include capital expenditure items (depreciation and amortisation) and operational expenditure items (salaries and wages, services and utilities, property maintenance, security services, contract services and general administration). The Commission examined total aeronautical costs, as airports are capital intensive. Additional insight can be gleaned from looking at aeronautical operating costs (defined here as total costs less depreciation and amortisation). Operating costs represent ongoing expenses, such as labour and utility costs.

An airport operator exercising its market power might allow its operating costs to increase over time. An airport that is constrained — whether by competition, countervailing power from airlines or effective regulation — has incentives to prevent operating costs per passenger from increasing. That is not to say that costs will not increase over time, even for an airport that is operationally efficient. For example, some airport operators argued that the costs of servicing international passengers are greater than domestic passengers (Sydney Airport, sub. 53). International aeronautical services generally require more terminal space for security and immigration processes, baggage handling and full separation of arriving and departing passengers. As a result, costs per passenger would be expected to increase if international passengers increase as a share of total passengers.

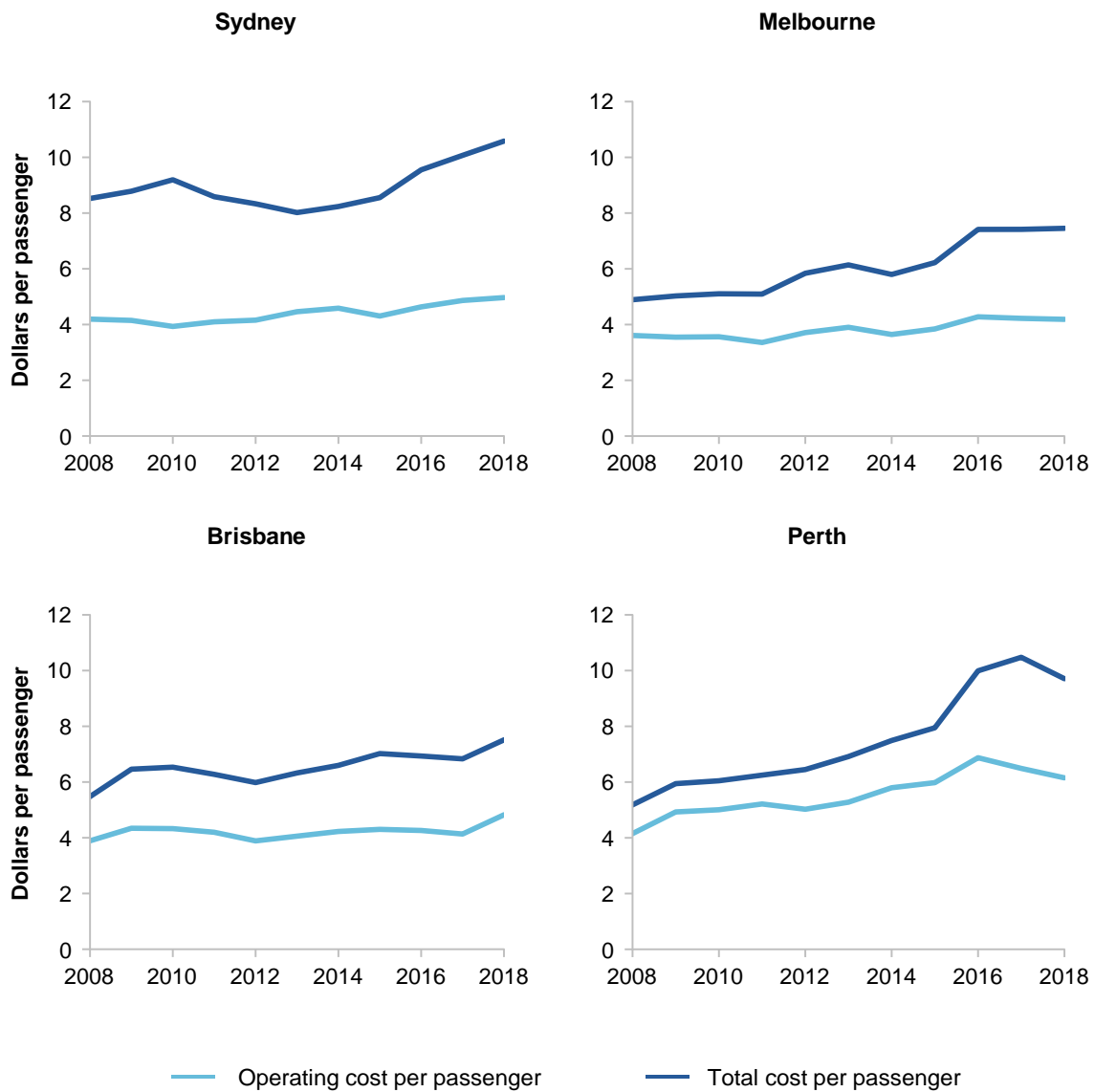
Operating costs and total costs per passenger increased modestly at Sydney, Melbourne and Brisbane airports over the past decade (figure 5.1). Operating costs per passenger at Perth Airport increased more rapidly — by about 50 per cent from 2007-08 to 2017-18. Perth Airport's operating costs per passenger have declined in the past two years. Perth Airport's total costs also increased relatively rapidly, largely due to increased depreciation costs. Perth Airport identified several reasons for its increased costs per passenger, and also stated that costs are expected to grow more slowly in future.

For the duration of the recently expired aeronautical agreements, costs were higher than expected over a number of years. This increase in cost is primarily attributed to the underestimation of the cost for the stepped increase in operations over the period including the opening of 2 additional new terminals (T1 (Domestic) and T2), exacerbated by the mining boom which drove a significant increase in labour cost. However, it should be noted that because of the fixed real price nature of the PSA agreements [Prices and Services Agreements], these additional costs were not passed on to airlines but were instead absorbed by Perth Airport shareholders. Further,

as a result of a range of efficiency initiatives introduced since 2016, operating costs per passenger in 2019 are expected to be at the same levels as they were forecast to be when the PSA contracts were entered into in 2011 and are forecast to grow below inflation until FY21. (sub. 51, p. 43)

Qantas Group was critical of the cost of some of Perth Airport’s proposed investments. For example, Qantas Group recently retrofitted terminal 3 at Perth Airport because Qantas Group estimated that it could complete the task at lower cost — Perth Airport’s expected cost was 80 per cent higher (sub. 48, p. 19).

Figure 5.1 Costs increased at most airports over the past decade
Constant 2018 dollars, financial year



Sources: Commission estimates based on ACCC (2019) and various back editions.

Perth Airport has experienced declining domestic passenger numbers since the end of the resources boom. Overall, total passenger growth was much lower than forecast in its most recent master plan (Perth Airport 2014). It may not be possible to scale some costs, such as electricity usage, to match changes in passenger demand, so total and operating costs per passenger at Perth Airport would likely have been lower had passenger numbers been closer to their forecast levels.

Security costs at the monitored airports

The AAA stated that the rise in operating costs in recent years at the monitored airports is ‘... probably due to increasing security costs, maintenance costs associated with ageing assets, and economy-wide increases in energy costs’ (sub. 50, p. 56).

ACCC monitoring report data show that security costs have consistently made up the greatest share of operating costs at the monitored airports (ranging between 30–40 per cent of operating costs), with this share remaining fairly stable over the past decade.

Some airlines raised concerns about the cost-effectiveness of security services delivered by airport operators, and the increasing scope of recoverable security costs (box 4.4). For example, A4ANZ stated that airports provide government mandated security at a higher cost than what some airlines can provide.

The inefficiency of airport operations is further exemplified by the significant difference between security screening services managed by airlines, and the cost of equivalent services charged at common user terminals which are managed by the airport authority. (sub. 44, p. 21)

A4ANZ further stated that airlines sometimes pay a competitor airline with screening authority to undertake security screening services on their behalf, rather than pay what they state are ‘exorbitant’ prices charged by the airport (sub. 44, p. 21). Airports disputed claims that security costs are excessive. Canberra Airport, for instance, said that its charges (including for security) were agreed to by airlines (sub. DR169, p. 17).

Qantas Group also argued that security costs at airports were higher than necessary, and stated that in some cases airports are broadening the coverage of security costs to ‘... go beyond those security services necessary to safeguard against unlawful interference with aviation’ (sub. 48, p. 29). Qantas Group listed examples of services Qantas and Jetstar have routinely had to pay for, including car licence plate readers in car parks, taxi and hire car areas, arrivals areas and departure areas, as well as screening of retail and other non-aeronautical goods and staff (sub. 48).

In response to the Qantas Group submission, the AAA said that CCTV technology and number plate recognition systems have been implemented at several major airports in consultation with the Australian Federal Police, Australian Border Force and airlines, to assist in identifying persons of interest (sub. 73). The AAA acknowledged that some airports do not separately charge retailers for the screening of goods and staff. However, it said that a significant portion of retail goods may be consumed in airport lounges and that, in any case, the costs are small,

estimating that ‘... retail and lounge consumable screening makes up three per cent or less of the total costs associated with passenger screening’ (sub. 73, p. 13).

The utilisation of some inputs declined

Another measure of operational performance is the utilisation rate of an input (for example, runways per million passengers) or its inverse (a partial productivity measure). The Commission estimated the utilisation rates of runways, gates and terminal area for each airport in 2008 and 2016 (table 5.1). All airports had higher runway utilisation in 2016 than in 2008. Passenger numbers increased and no new runways were completed at any of the airports during the period. Brisbane and Perth airports had lower gate utilisation in 2016 than in 2008.

Table 5.1 Capital input utilisation rates
Per million passengers^a

Airport	Utilisation rate 2016			Change 2008–2016 (per cent) ^b		
	Number of runways	Number of gates	Terminal area ('000 square metres)	Number of runways	Number of gates	Terminal area ('000 square metres)
Sydney	0.07	1.29	9.20	-21.3	-34.6	-21.7
Melbourne	0.06	1.97	6.74	-29.1	-22.3	30.1
Brisbane	0.09	3.76	11.08	-17.2	13.1	110.0
Perth	0.14	4.65	6.18	-34.3	91.5	-13.3

^a Passenger numbers for Australian airports are sourced from the ACCC monitoring report. ^b An increase in the utilisation rate between 2008 and 2016 signifies a reduction in utilisation and partial productivity, whereas a decrease in the utilisation rate over time signifies an increase in utilisation and partial productivity.

Sources: Commission estimates based on ATRS (2010, 2018) and ACCC (2018).

Results should be interpreted carefully. High utilisation of terminal area could mean the terminal is congested, affecting passengers’ experiences. Further, low utilisation may not be of concern if the airport infrastructure is needed to accommodate peak demand, or if it reflects recent investment to support expected growth in passengers. Notwithstanding these caveats, input utilisation rates provide another reference point to assess operational efficiency.

International comparisons of operating costs and input utilisation

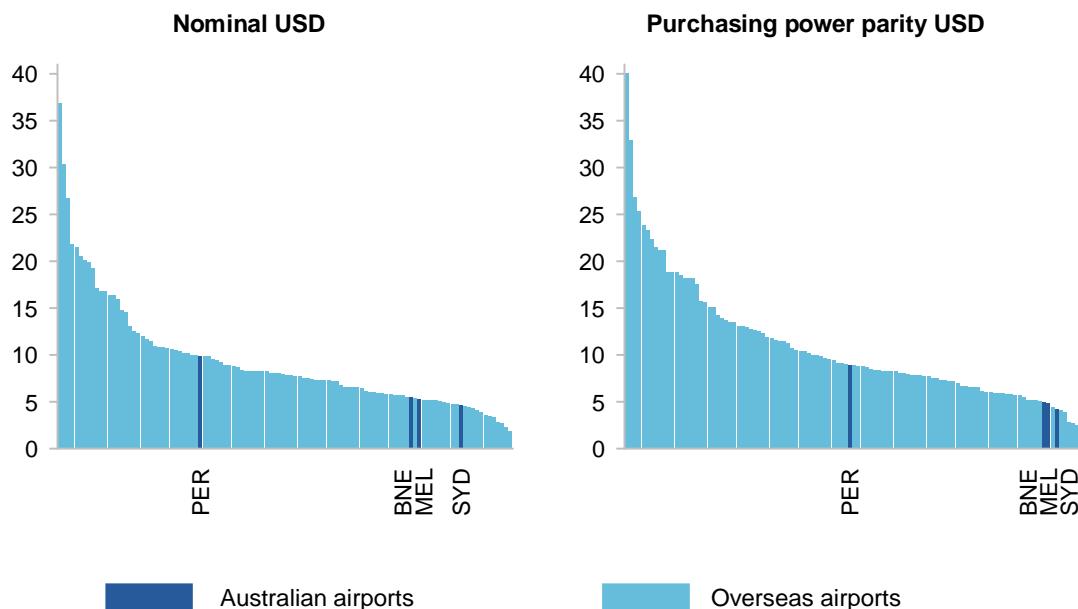
The Commission examined whether Australian airports’ operating costs and capital input utilisation rates (for runways, gates and terminal area) are in line with overseas airports. Total cost comparisons across airports were not made because the ATRS does not provide relevant data (there are no depreciation and amortisation costs).

Separate data on aeronautical and non-aeronautical services were not available for overseas airports. Thus the Commission used whole-of-airport figures instead. These comparisons

should be interpreted with care. Airports with relatively low whole-of-airport operating costs may not necessarily have low aeronautical costs.

Sydney, Melbourne and Brisbane airports' whole-of-airport operating costs per passenger in 2016 were below average among overseas airports (figure 5.2). These results held when other samples of airports were used (appendix B). Perth Airport's whole-of-airport operating costs per passenger were in line with the average of the sample after making PPP adjustments between countries (figure 5.2). However, they are higher on a nominal basis and relatively high when compared with overseas airports that also have a low share of international passengers (appendix B).

Figure 5.2 Whole-of-airport operating costs per passenger in 2016^{a,b}
Comparison with selected overseas airports^c



^a The Commission used variable costs as a proxy for operating costs. The ATRS defines variable costs as all non-capital related costs. Estimates are from whole-of-airport company financial reports and include non-aeronautical costs. PPP conversions are approximate based on average exchange rates and PPP rates for 2016. ^b Passenger numbers for Australian airports are sourced from the ACCC monitoring report. ^c Airports in the ATRS database with more than 10 million passengers in 2016.

Sources: Commission estimates based on ATRS (2018) and ACCC (2018).

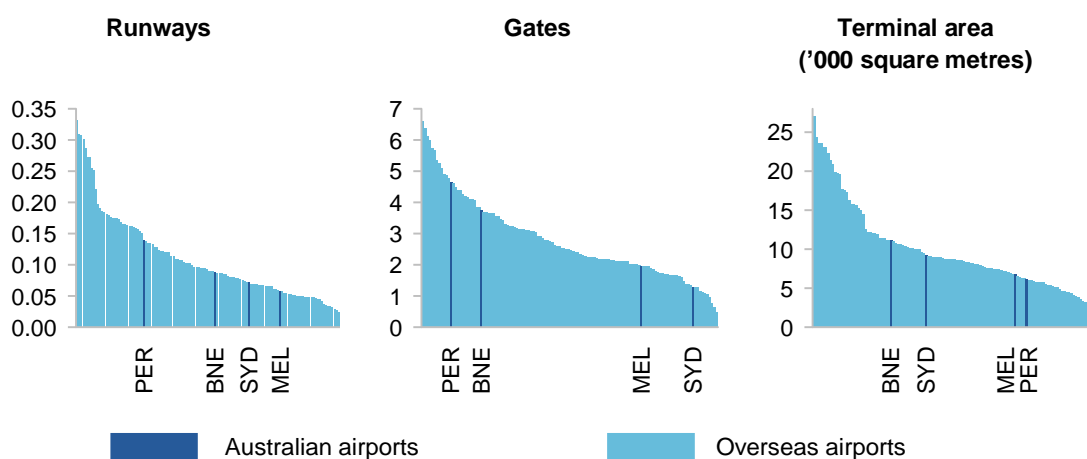
International comparisons need to be made with caution. However, submissions that used alternative samples of airports came to similar conclusions as the Commission.

- The AAA provided results generated by InterVISTAS comparing whole-of-airport operating costs for the five largest Australian airports with a selection of overseas peers (14 airports in total) (sub. 50, p. 59). Peer airports were selected on the basis of their traffic profile. Perth Airport was the only Australian airport with operating costs and total costs above the median.

- The Airports Council International (ACI) presented data from Leigh Fisher for the 50 largest international airports (sub. 16, p. 6). It showed that the monitored airports ranked between having the 6th (Melbourne) and 21st (Perth) lowest total costs per passenger.

With regard to capital inputs, most of the utilisation rates in 2016 for the monitored airports were average or above average compared with overseas airports. Brisbane and Perth airports generally had lower utilisation rates than Sydney and Melbourne airports, particularly for number of gates per passenger (figure 5.3).

Figure 5.3 Input utilisation per million passengers in 2016^a
Comparison with selected overseas airports^b



^a Passenger numbers for Australian airports are sourced from the ACCC monitoring report. ^b Airports in the ATRS database with more than 10 million passengers in 2016.

Sources: Commission estimates based on ATRS (2018) and ACCC (2018).

The Commission used these international data as an overall check of whether the operational performance of the monitored airports appears to be in line with overseas airports. This can provide reason to delve deeper into what is driving certain results. For example, at first glance, an airport with relatively low utilisation of capital inputs could mean that it has overinvested. From figure 5.3, Brisbane Airport has relatively low utilisation of gates and terminal area. Although a potential concern, this likely reflects the large expansion of its international terminal over the past decade (table 5.1). Brisbane Airport argued that this investment was needed to address peak demand (discussed in section 5.5).

Measures of productivity

A limitation of input utilisation rates is that too much emphasis can be given to one indicator. While one input might be utilised relatively efficiently, it may come at the expense of other inputs not being utilised as efficiently. One way to address this is to measure total factor

productivity (TFP) — which can take into account multiple inputs and outputs. Measures of TFP weight individual inputs and outputs to calculate an overall summary measure of productivity over time.

Niemeier, Forsyth and See estimated the TFP of the four monitored airports (Niemeier, Forsyth and See 2018, and discussed in Forsyth, sub. 15). Their preliminary results show productivity increased at the monitored airports from about 2002 to 2008, but has declined since then. The study estimated that productivity per year declined between 2008 and 2017 at Sydney Airport by 2.3 per cent, at Melbourne Airport by about 2.5 per cent, at Brisbane Airport by 3.6 per cent and at Perth Airport by 4.2 per cent. In explaining why this may have occurred, Forsyth said that the decline in productivity across all airports is consistent with rising costs over the same period (sub. 15, p. 4).

Niemeier, Forsyth and See (2018) used a financial measure to estimate TFP, but other studies typically employ physical quantities of inputs and outputs. This is useful for cross-country comparisons of airport productivity, because it avoids the issue of differing financial accounting methodologies across countries.

TFP results should be interpreted carefully. Changes in airports' estimated productivity reflect changes in their utilisation of inputs and the constraints they face during the measurement period. Capital expansion at airports is often large-scale and lumpy, whereas passenger growth increases more steadily over time. Therefore, a large capital expansion will typically lead to a fall in measured productivity over the short term. A measured productivity decline is not necessarily a 'poor' outcome if upgrades in infrastructure are required to accommodate growth in passenger numbers, and are completed efficiently.

The Commission explored the use of data envelopment analysis (DEA) and other statistical techniques to compare relative productivity across airports. DEA is used to estimate a summary 'productivity score' for each airport. Airports that maximise their output given the inputs used in production, are identified as being on the 'best practice frontier' and have a score of 1. An airport with a score of 0.8 is 20 per cent below the frontier, or uses 20 per cent more inputs relative to the most productive airport to process a given number of passengers.¹

The performance of each airport is based on the specific inputs used in the DEA model, and can only provide information on whether the quantities of those inputs are close to the quantities used by the most productive comparator airports. That is, whether an airport could use less inputs to process the same number of passengers, if it were to change its production processes to match those of an airport that uses less resources per passenger. A limitation of the approach is that it assumes that only those inputs specified in the model are used to produce the output.

¹ This is usually referred to as efficiency in the literature. For example, an airport's relative efficiency is determined by comparing the actual ratio of its outputs to inputs with the optimal ratio of outputs to inputs. For consistency with the terminology used in this chapter, the term 'productivity' or 'productivity score' is used here instead.

The Commission conducted DEA using data from the ATRS for 2016 and explored the effect of varying inputs and airports in the sample (box 5.2). It assumed that there was only one output (passenger numbers) and used the following inputs:

- number of runways
- number of gates (in some specifications)
- terminal area
- whole-of-airport operating costs.

DEA is a complement to the partial indicator analysis, and provided similar insights. This is because the DEA model summarises each airport's combined use of inputs relative to others in one measure (information presented in figures 5.2 and 5.3).

Results were found to be sensitive to model parameters, including:

- the sample of airports used
- variables chosen as inputs into production
- production technology (constant or variable returns to scale).

There was not always a consistent trend in the results across all airports from changing an assumption. Some general observations are noted below.

Sydney and Melbourne airports had productivity scores above the median (a result that was robust to changes in model parameters). Sydney Airport was usually ranked as being the most productive of the monitored airports. In the model, a more productive airport is one that processes more passengers per unit of input. Sydney Airport's relatively high productivity score could partially reflect that it is more congested than other airports (chapter 7). It also likely reflects that Sydney Airport is further into its investment cycle than the other monitored airports. As noted above, an airport that undertakes new investment can initially experience a fall in productivity. The number of passengers that Sydney Airport processes is also affected by its regulatory constraints on aircraft movements, such as the movement cap and curfew (chapter 7).

Brisbane and Perth airports had lower productivity scores in 2016 than the other monitored airports. They performed broadly in line with or slightly below the median of other airports in the sample. The lower utilisation rates for most of the physical inputs at Brisbane and Perth airports in 2016 (figure 5.3) translates into a lower productivity score at these airports. The modelling suggests they had more scope to reduce inputs (or increase passenger numbers), and move closer to best practice.

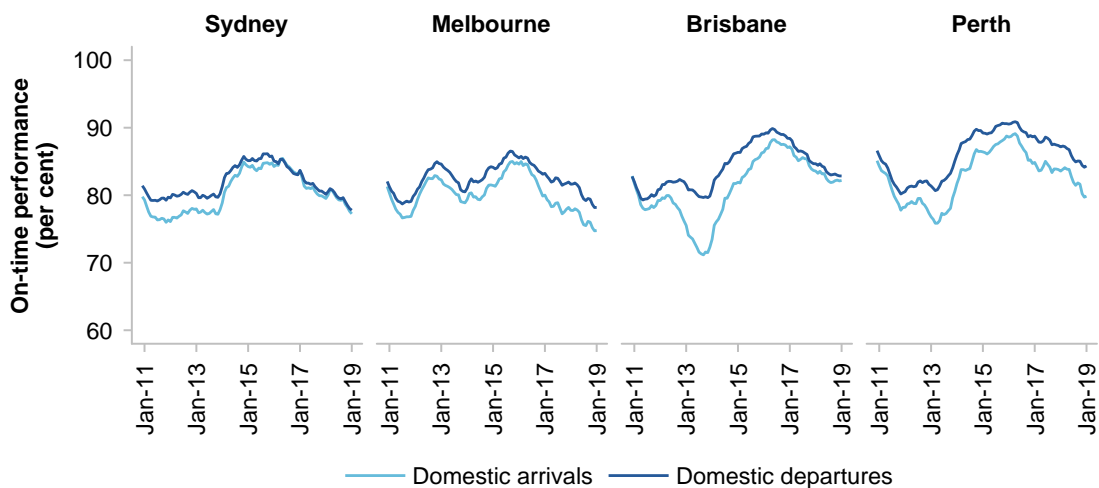
On-time performance has declined in recent years

Airport on-time performance can materially affect passengers' experiences and airlines' operational efficiency. Indicators of on-time performance are often used as measures of

performance in service level agreements (SLAs) between airports and airlines. On-time performance is not wholly within an airport’s control. It can be affected by airlines, for example, through scheduling and resource planning, as well as exogenous factors such as passenger disruptions, resource shortages, weather and delays at other airports. New technologies and methods being rolled out by Airservices Australia have improved the predictability of domestic flight departures and arrivals. Further developments are expected to lead to additional improvements, such as more efficient flights and better outcomes for passengers, airlines, airports and the environment (Airservices Australia, pers. comm., 8 January 2019).

The Commission examined several sources of on-time performance data. Domestic on-time performance varied across airports and over time, ranging mainly between 75 and 90 per cent from 2011 to 2019 (figure 5.4). It peaked above 85 per cent at the four monitored airports in 2016, with Brisbane and Perth airports experiencing the largest improvements since 2011. These observations are partly attributed to airport capacity expansions and the end of the resources boom, which reduced the number of resource-related air transport services, particularly at Perth Airport (AAIG, sub. 20). Domestic on-time performance at each monitored airport has declined since 2016, returning to about 2011 levels or below.

Figure 5.4 Domestic on-time performance by airport^a
12-month moving average, December 2010 to January 2019



^a A flight is considered on time if it arrives or departs within 15 minutes of its scheduled time, excluding cancellations. Data only reflect published routes operated by Qantas Group, Virgin Australia Group and Regional Express. Published routes averaged 8000 or more passengers per month over the previous six months, and had two or more airlines operating in competition.

Source: Commission estimates based on BITRE (2019).

The Board of Airline Representatives of Australia (BARA) stated that from 2014 to 2018 on-time departures performance for international flights at Sydney and Melbourne airports averaged 77.5 and 78.3 per cent, respectively (sub. DR92, pp. 9–10). These airports ranked mid-range among comparable overseas airports (airports that had more than 10 million

passengers a year and less than 50 per cent international passengers). Brisbane and Perth airports performed better, in part reflecting their simpler operations. BARA estimated that lifting international on-time departures performance at Sydney and Melbourne airports to equal the 10th best comparable overseas airport (about six percentage points) would ‘... generate airline cost savings of about \$130 million and \$80 million over 5 years at Sydney and Melbourne airports, respectively, and deliver better outcomes to passengers’ (sub. DR92, p. 9).

OAG Punctuality League reports show that whole-of-airport on-time performance and rankings for the monitored airports have fallen between 2017 and 2018, consistent with trends in domestic on-time performance (table 5.2). Brisbane and Perth airports rank highly compared with overseas airports in the same size category. Sydney and Melbourne airports rank in the bottom half of airports in their size category.

Table 5.2 OAG Punctuality League results
2017 and 2018

Airport	Airport size category	2017			2018 ^b	
		Number of airports in size category	Airport ranking	On-time performance (per cent) ^a	Airport ranking	On-time performance (per cent) ^a
Sydney	Major	27	16	78.29	17	76.10
Melbourne	Major	27	13	79.04	18	74.69
Brisbane	Large	55	6	83.71	8	82.58
Perth	Medium	59	8	84.20	16	81.94

^a A flight is considered on time if it arrives or departs within 15 minutes of its scheduled time, including cancellations. ^b The number of airports in each airport size category in 2018 was not published.

Sources: OAG (2018a, 2018b, 2019).

Carew commented that on-time performance at Melbourne Airport has been poor, including on the Sydney–Melbourne route (sub. DR90). Some participants suggested that the poorer performance at Melbourne may be partly due to the airport allowing scheduled flights to exceed the capacity of the infrastructure (chapter 7; BARA, sub. DR92; Rex, sub. 63). Sydney Airport stated that it is working to improve its on-time performance in collaboration with stakeholders by, for example, using technology to make gate allocations more efficient (sub. DR181).

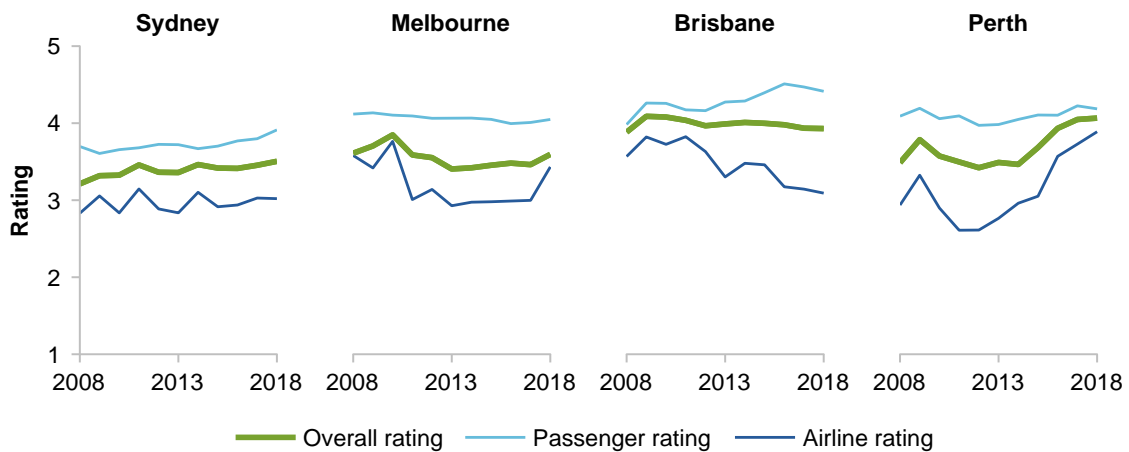
Passengers and airlines have differing views on airport service quality

Airport service quality can be gauged using a range of measures that differ in their coverage of airport services and facilities, and in quality attributes, such as the standard and availability of facilities, and time spent waiting in queues.

ACCC quality of service ratings

The ACCC's quality of service monitoring covers passenger-related and aircraft-related services and facilities, and is informed by both objective and subjective data from passengers and airlines. The ACCC's overall service quality ratings across the four monitored airports have remained within the 'good' to 'satisfactory' range since 2007-08 (figure 5.5). In 2017-18, all four airports were rated as 'good' for the first time in the past decade.

Figure 5.5 **Average quality of service ratings from ACCC monitoring^{a,b}**
Financial year



^a The ACCC's five-point rating scale is: very poor (1–1.49), poor (1.50–2.49), satisfactory (2.50–3.49), good (3.50–4.49), and excellent (4.5–5) (ACCC 2019). ^b Overall ratings cover aeronautical, car parking, and some landside operations.

Source: ACCC (unpublished) based on charts in ACCC (2019) and various back editions.

Perth Airport had the largest increase in its overall quality rating since 2011-12, which coincides with large-scale investments in terminals and a fall in total passenger numbers at the airport. Sydney, Melbourne and Brisbane airports have also invested substantially, but their overall quality ratings have been relatively steady. Some of these investments may have been required to keep pace with increasing passenger numbers at these airports, meaning that they will not necessarily be reflected in better service quality ratings.

Average ratings for both domestic and international terminal facilities were within the 'good' range at all airports in 2017-18, except for domestic terminal facilities at Sydney Airport, which had an average rating of 'satisfactory'. Average ratings for domestic terminal facilities exceeded that of international facilities at Melbourne and Perth airports, while the opposite was true for Sydney and Brisbane airports.

Methodological issues and biases limit the robustness of these ratings (box 5.1). Average airline ratings are much more volatile than passenger ratings, which could be explained by low airline response rates. Further, the results do not distinguish between ratings for different

groups who may have differing service quality expectations, for example, low-cost or full-service carriers, or business or leisure passengers. This limits the conclusions that can be drawn from the ratings (Trischler and Lohmann 2018).

International comparisons of passenger service quality ratings

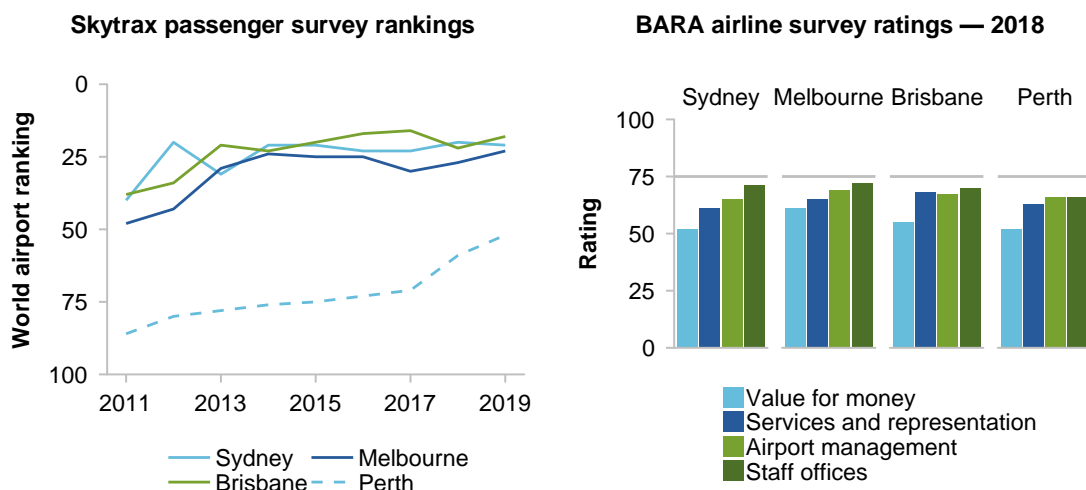
Global passenger surveys and rating systems can be used to compare service quality at Australian airports with overseas airports. These cover many areas of passenger experience including: terminal facilities; ease with which passengers navigate through the airport; security and immigration; baggage delivery; and ground transport. These measures differ from those used for ACCC monitoring in that they include DTLs and non-aeronautical services and facilities, as they are mainly used for commercial rather than regulatory purposes. These subjective indicators could be affected by bias in the same way as the ACCC quality of service ratings. The four monitored airports performed relatively well by international standards on most measures.

- Skytrax, an international air transport rating agency, rates airports according to the passenger experiences they offer. Of 140 airports, only 12 achieved a 5 out of 5 star rating, 49 achieved 4 stars (including Sydney, Brisbane and Perth) and the remainder achieved 3 stars (including Melbourne) (Skytrax 2019c).
- Skytrax also conducts an annual passenger satisfaction survey, which was completed by passengers from over 100 nationalities across 550 airports in 2019 (Skytrax 2019a). Rankings of the four monitored airports have improved slightly since 2011, with Sydney, Melbourne and Brisbane airports sitting within the top 25 airports in the world in 2019, while Perth ranked 52nd (figure 5.6).
- Passenger reviews published on Skytrax present a negative picture of airports, with Sydney and Brisbane airports scoring aggregate ratings of 4 out of 10, and Melbourne and Perth airports scoring 3 (Skytrax 2019b). Boscutti analysed reviews of the monitored airports from 2010 to 2018 and concluded that ‘the great majority of reviews do not recommend any of the airports. In some years, some airports received not even a single positive review’ (sub. DR163, p. 7). Many airports performed poorly based on passenger reviews — the average rating of the 92 airports that had received at least 100 reviews over the past decade was 3.6 out of 10 (Commission estimates based on Skytrax (2019b)).
- The ACI Airport Service Quality survey programme compares passenger satisfaction at over 330 participating airports (ACI 2018). Overall ratings for the four monitored airports have improved since 2012, and all had ratings of at least 4 out of 5 by 2018 (AAA, sub. 50, p. 55). The ACI stated that ‘... Australian airports perform very well in general and at the same level of the world average score of participating airports’ (sub. 16, p. 7).

Airline ratings

Airline ratings tend to present a less favourable picture of airport service quality. BARA conducted a survey of its international airline members in February 2018 and received 70 individual responses across the four monitored airports (sub. 42, p. 11). On average, airports achieved ratings below the ‘acceptable threshold’ of 75 out of 100, with ‘value for money’ receiving the lowest average score at all airports (figure 5.6). About 69 per cent of airlines did not believe that they were getting value for money in airport services (BARA, sub. 42, p. 13). The ACCC’s monitoring also shows that airlines are less satisfied than passengers (figure 5.5). Only Perth Airport achieved an overall airline rating of ‘good’ in 2017-18 — other monitored airports achieved ‘satisfactory’.

Figure 5.6 Passenger and airline survey ratings of airports^a



^a In BARA’s airline survey, an overall score of 75 indicates that airlines are satisfied with the airport’s performance on average.

Sources: BARA (sub. 42, pp. 15–18); Skytrax (2018a, 2018b, 2018c, 2018d, 2019d).

In their commentary accompanying ACCC survey ratings, airlines often cited issues with congestion and a lack of availability of facilities, such as aircraft parking, check-in and baggage collection, as well as other issues such as outdated facilities (ACCC 2019). BARA voiced some service quality issues from the perspective of international airlines (sub. 42, sub. DR92, sub. DR160, sub. DR184). Particular areas of concern included: mishandled international baggage at all monitored airports; poorly delivered bussing operations at Sydney and Melbourne airports, which contributed to poor on-time performance; and excess foreign object debris at Sydney Airport. Some airports noted that responsibility for some aspects of the delivery of these services are shared between multiple stakeholders (Brisbane Airport, sub. DR179; Sydney Airport, sub. 53, sub. DR181). For example, responsibility for baggage handling is shared between ground handlers (contracted by airlines) and the airport. Brisbane Airport stated that it is in discussions with airlines about improving baggage

handling (sub. DR179). Sydney Airport stated that it is also working to improve baggage handling and reduce foreign object debris (sub. DR181).

The quality of service provided to airlines is also captured through SLAs, which are developed in consultation between airports and airlines (chapter 4). SLAs are increasingly incorporating key performance indicators. However, airline participants questioned the benefits that SLAs have had on the quality of airport services to date. BARA acknowledged improvements achieved under the SLA with Sydney Airport, but noted remaining concerns (sub. 42). BARA and Qantas Group considered that there was a disconnect between the performance assumed by airports and the actual quality of services delivered to passengers and airlines for prices paid (BARA, sub. 42; Qantas Group, sub. 48). BARA further stated that airport operators do not adopt sufficient accountability for service outcomes (sub. DR92). As discussed in chapter 4, efforts by airline and airport operators to enhance the negotiation process through a set of agreed principles (including those relating to service quality) could improve efficiency. Parties could voluntarily pursue these principles through industry-led measures, or request that the Australian Government facilitate this process.

Airport workers' views

The Transport Workers' Union of Australia also highlighted the need to consider the quality of service provided to airport workers.

Any examination of the effectiveness of price and quality of service - particularly in terms of airport operations - must include an examination of labour standards. Service providers such as companies employing ground handlers, caterers, cleaners, security and check-in staff pay exorbitant amounts in rent and have to adhere to numerous 'conditions of use', rules and regulations in order to operate at the airport, which have a direct impact on the working conditions of their workforce. Yet airports don't have any accountability or responsibility for the conditions these workers operate under, despite having the capacity to do so through their contracts with service providers. (sub. 60, p. 3)

The Transport Workers' Union of Australia argued that job security, full-time work, pay rates and conditions for airport workers have declined in recent years, which they said has led to safety and security problems (sub. 60).

5.3 Aeronautical revenues and charges

Airports with market power could increase their aeronautical charges in excess of efficient levels (chapter 2). The preferred reference point for efficient pricing of infrastructure services — long-run average cost — is a conceptual benchmark that is unable to be calculated in practice (chapter 2). However, other indicators and proxies can give an insight into whether an airport is persistently charging significantly above this benchmark.

Aeronautical revenue per passenger is widely used as a measure of prices in airport monitoring, but it obscures relevant factors including airports' domestic and international

passenger mixes, and differences in charges for domestic and international aeronautical services. These are important because the markets for domestic and international air transport are separate, with differences in costs (section 5.2) and in incentives for airports to exercise their market power (chapter 3). Analyses in this section aim to delve into the reasons behind changes in aeronautical revenue per passenger. Proxies for international and domestic aeronautical charges can provide a useful (albeit imprecise) insight into these drivers.

Scheduled charges as a proxy for aeronautical charges

Airports require airlines to pay charges for the use of the airfield and terminals. Some charges are levied on a per passenger basis and others are based on aircraft size (maximum take off weight (MTOW)). Australian airports negotiate directly with individual airport users or user groups on the terms of access, including aeronautical charges (chapter 4). This can lead to different airlines paying different prices for the same service.

Contracts between airports and airport users are confidential and there is limited publicly available information on negotiated outcomes. Thus the Commission used publicly available proxies from several sources to examine trends in international and domestic aeronautical charges at Australian airports, and compared them with overseas airports. Data include:

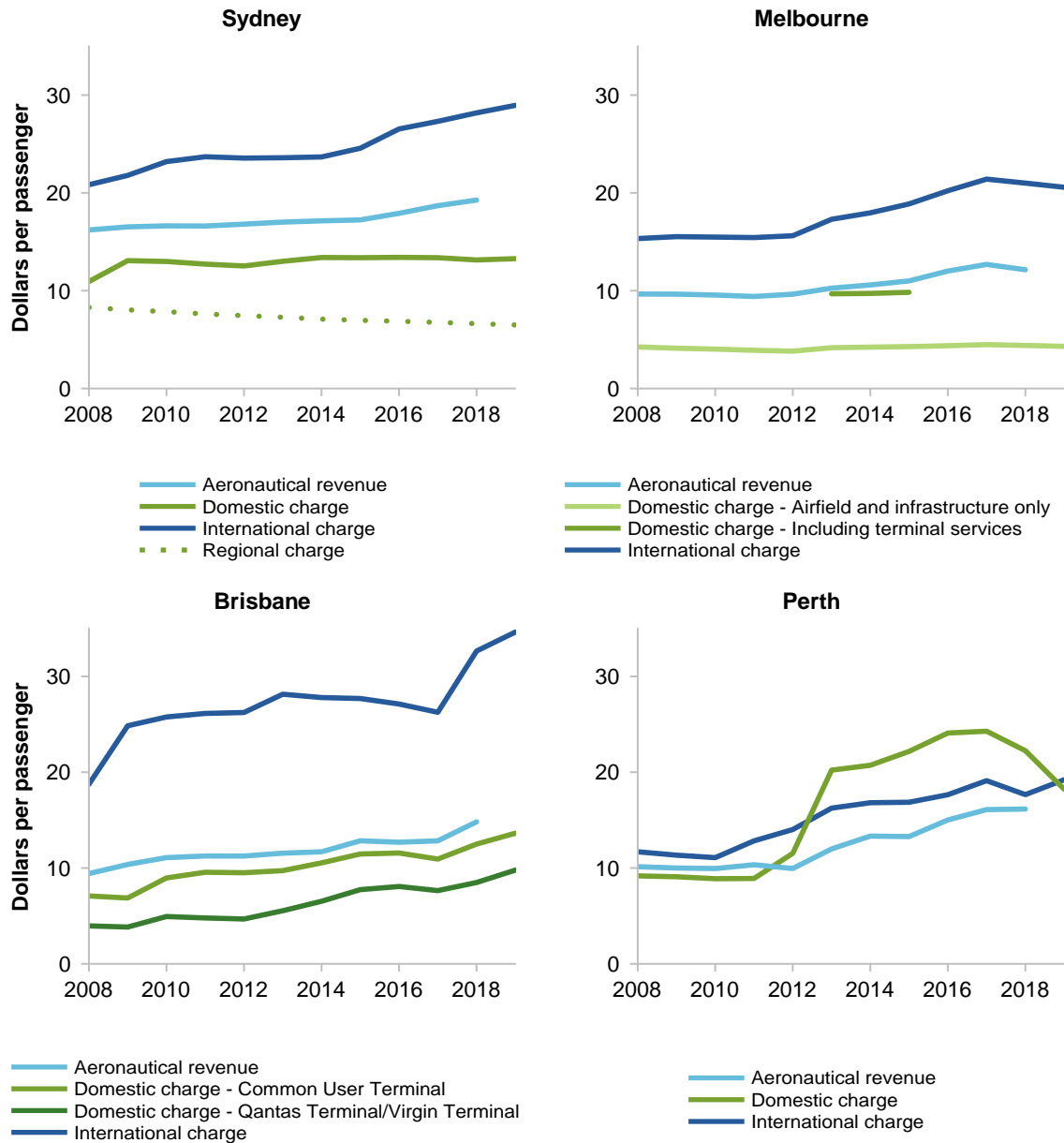
- airports' published schedules of charges, often referred to as the rack rate aeronautical charges. The actual charges that airlines negotiate with Australian airports are likely to be lower than the scheduled charges for comparable services
- ACCC data on inflation-adjusted price indexes for different components of charges and aeronautical revenue per passenger, at the four monitored airports
- ATRS data on aeronautical revenues from a sample of overseas airports.

Trends in aeronautical revenue and charges

The ACCC monitoring reports contain data on revenue per passenger for the four monitored airports up to 2017-18. In contrast, scheduled charges are forward looking, so one additional year of data for this measure is presented for the four monitored airports, using charges as of 1 July 2017 and 1 July 2018 (figure 5.7). Movements in aeronautical revenue per passenger can be largely explained by changes in scheduled charges and the passenger mix.

Figure 5.7 Aeronautical revenue and scheduled charges^a

Constant 2018 dollars



^a Average scheduled charges per financial year. Estimates based on publicly available price schedules and ACCC monitoring reports. Aeronautical charges are presented exclusive of GST. Security charges are excluded. Only core passenger service charges are included (for example, additional check-in or baggage handling fees are excluded). Melbourne Airport only includes domestic airfield and infrastructure charges (excluding terminal services) for the full time period.

Source: Commission reconciliation of scheduled charges and data from ACCC (2019).

At Sydney, Melbourne and Brisbane airports, growth in aeronautical revenue per passenger to 2017-18, adjusted for inflation, has been gradual (figure 5.7). At Sydney and Melbourne airports, changes in revenue per passenger align with shifts in the passenger mix toward a

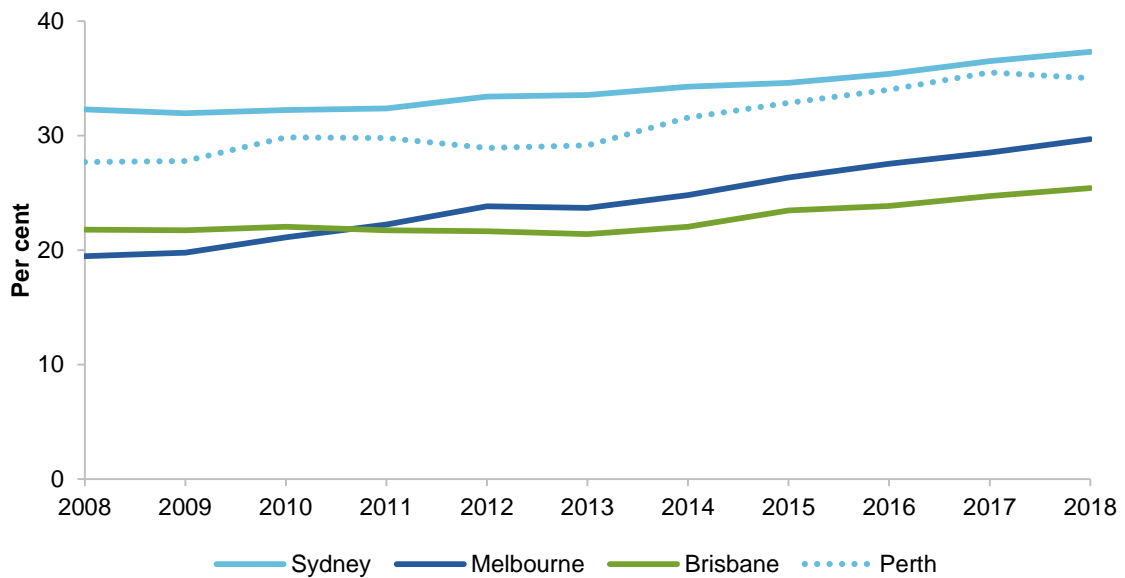
greater share of international passengers (figure 5.8) and steadily increasing international aeronautical charges, which are significantly higher than domestic charges (figure 5.7).

Melbourne Airport had the biggest shift in its passenger mix, with the share of international passengers increasing from about 20 per cent to 30 per cent over the past decade (figure 5.8). This has had a pronounced effect on aeronautical revenue per passenger.

Brisbane Airport's international charges increased much faster than its domestic charges. However, its growth in, and total share of, international passengers was less than the other monitored airports (figure 5.8). This, in part, explains why its revenue per passenger did not increase in line with increases in its international charges. In addition there might be differences between scheduled and negotiated charges which could influence the revenue per passenger received.

Unlike the other monitored airports, Perth Airport's revenue per passenger increased significantly from 2011-12, which was also when it significantly increased its scheduled aeronautical charges (figure 5.7) and experienced an increase in its share of international passengers (figure 5.8).

Figure 5.8 Share of international passengers at monitored airports^{a,b}



^a BITRE airport traffic data were used because the ACCC monitoring report only includes passenger numbers by type (international or domestic) from 2010-11 onwards. Charter flights and general aviation are excluded from BITRE data. ^b Financial years ending 30 June.

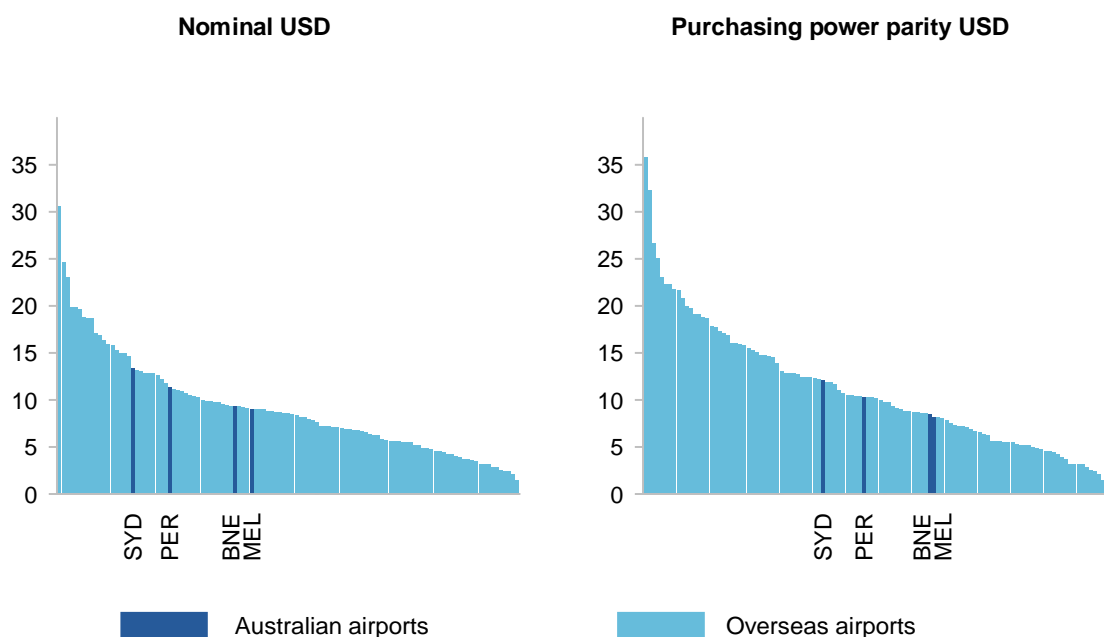
Source: Commission estimates based on BITRE (2018a).

International comparisons of aeronautical revenues and charges

Aeronautical revenue per passenger at the monitored airports was mid-range when compared with overseas airports, after adjusting for differences in purchasing power between countries (figure 5.9). Sydney and Perth airports were higher in the distribution on a nominal basis, but were still close to the median of the comparator airports. When measured on a PPP adjusted basis, these airports were close to the median of others in the sample. This was not always the case when different sets of comparator airports were used. The monitored airports typically have higher average aeronautical revenue per passenger when compared with other airports that have a low share of international passengers (appendix B).

An alternative way to compare aeronautical charges across countries is to estimate the charge for a specific aircraft type per turnaround (landing and take off), taking into account the actual charges at each airport. Undertaking such an exercise is complex and imprecise given the range of charge types used internationally. Nevertheless it provides a basis for making general conclusions about the level of charges at Australian airports.

Figure 5.9 **Aeronautical revenue per passenger in 2016^a**
Comparison with selected overseas airports^b



^a ATRS estimates of total revenue from landing, terminal and other fees for overseas airports, based on financial reports for 2016. These estimates exclude security charges. For consistency with figure 5.7, this figure uses ACCC monitoring data for Australian airports. Average values are used for 2015-16 and 2016-17. This includes aeronautical security charges. As a result, aeronautical revenue per passenger will be overstated for Australian airports relative to overseas airports in the sample. ^b Airports in the ATRS database with more than 10 million passengers in 2016.

Sources: Commission estimates based on ATRS (2018) and ACCC (2018).

While Australian airports' scheduled charges are almost exclusively applied on a per passenger movement basis (departure or arrival), most other airports in the sample apply:

- a landing charge based on MTOW and/or the level of noise generated by the aircraft
- a terminal charge (which often applies to departing passengers only).

Australian airports also differentiate between domestic and international passengers, whereas in Europe domestic and international charges are often the same. Seasonal and peak/off-peak pricing are also more commonly used abroad than in Australia.

The Commission estimated aggregate landing, terminal and parking charges for Boeing 737-800 and Boeing 777-300ER aircraft. These aircraft are commonly used for both short-haul (domestic and international) and long-haul flights departing from Australia's four monitored airports. The assumptions used were:

- Boeing 737-800 — MTOW of 79 tonnes; load factor of 80 per cent; maximum capacity of 174 passengers
- Boeing 777-300ER — MTOW of 352 tonnes; load factor of 80 per cent; maximum capacity of 396 passengers.

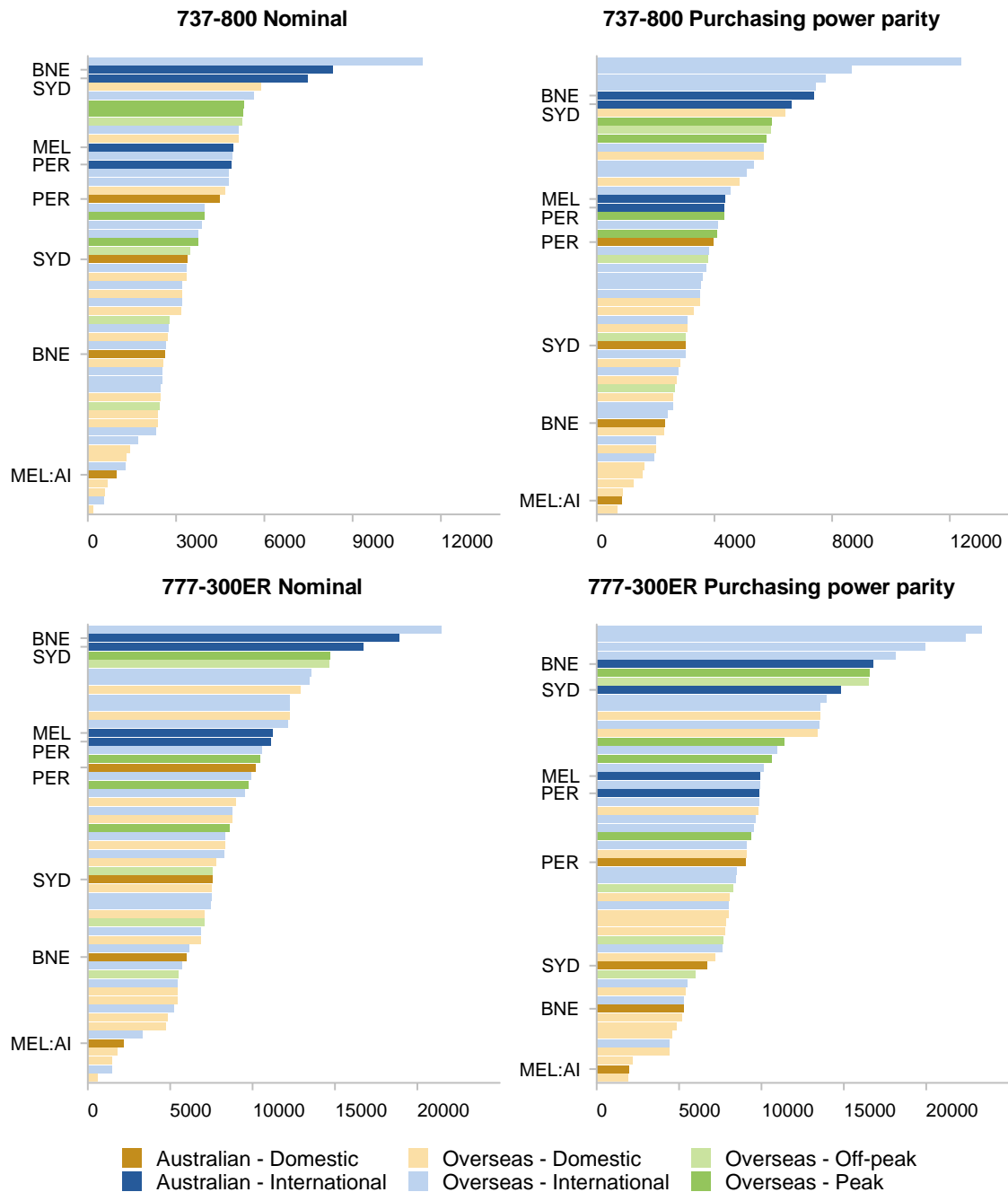
Both aircraft are assumed to be parked for two hours per turnaround. All core landing/runway and terminal charges are included. Additional charges for check-in, baggage handling and emissions are excluded. Security screening charges are included because it is not possible to separate out security charges from general aeronautical charges at all comparator airports. This has the effect of overstating charges at Australian airports relative to airports in jurisdictions where security services are provided by the government, such as New Zealand.

A number of submissions from airports and airlines compared financial measures (for example, charges and operating profit margins) at Australian and overseas airports. The Commission also used these airports for its own analysis of charges, where the data were publicly available. For all airports in the sample, charges are based on published schedules as at October 2018. Some schedules in the sample were most recently updated in 2016. Data for all four Australian airports are as at 1 July 2018.

The estimated turnaround costs for the two aircraft show that Australian international aeronautical charges (in nominal USD) are relatively high, but domestic charges are lower (figure 5.10). For the monitored airports (PPP-adjusted):

- domestic charges are generally about or below average
- international charges span a broad range — charges at Sydney and Brisbane airports are relatively high and Melbourne and Perth airports' charges are closer to the average.

Figure 5.10 Australian and overseas aeronautical charges
 Airport turnaround costs in USD (current published schedules)^{a,b}



^a Schedules published as at October 2018. Charges were most recently updated at most of the airports between 1 January and 1 July 2018. Data for all four monitored Australian airports are as at 1 July 2018. Peak and off-peak include time of day or seasonal charges. Charges exclude value added taxes. ^b The domestic charge at Melbourne Airport (MEL: AI) is for airfield and infrastructure only (it excludes terminal services). The 2016-17 ACCC monitoring report included a walk-up rate for domestic passengers for terminal access. Although it is not entirely comparable with current published schedules, on that basis, Melbourne Airport's domestic charges would remain lower than the other monitored airports, and low compared with overseas airports.

Source: Commission estimates based on scheduled charges from airport websites.

Participants drew on analysis that McKinsey & Company provided for the International Air Transport Association (IATA), which showed that aeronautical charges at all of the monitored airports are high when compared with a range of airports that are not fully privatised or face more regulatory oversight than the Australian airports (ACCC, sub. DR158; IATA, sub. 27). The Commission obtained slightly different results, with international charges at Melbourne and Perth airports being above average but within reasonable bounds, particularly when measured on a PPP basis. The differences in results likely reflect differences in methodology. The Commission used a different sample of airports and different aircraft type. The Commission also used its preferred method of a PPP adjustment for exchange rate differences, whereas the analysis provided for IATA used an exchange rate conversion, with no PPP adjustment.

In response to the draft report, Sydney Airport stated:

The ACCC was responsible for putting in place the existing price structure of Sydney Airport's charges in 2001 at the time of privatisation. At that time the ACCC calculated Sydney Airport's starting asset base (for international and shared asset bases) and determined new charges that reflected the ACCC's view on the actual costs of operating Sydney Airport. (sub. DR112, p. 38)

Brisbane Airport stated that costs have risen due to capacity investments recently made, which reflect the peakiness of international demand at the airport (sub. DR109). The Commission accepts that costs for international services may have risen, but without these data it cannot verify the extent to which international costs have changed relative to domestic costs.

Charges at non-monitored airports

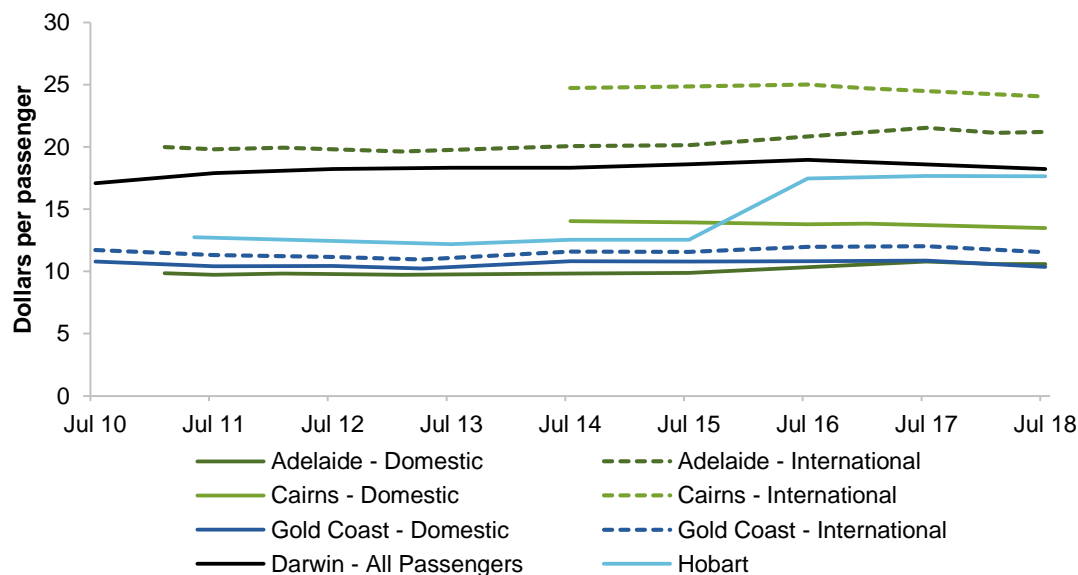
The Commission concluded in chapter 3 that the non-monitored airports do not have significant market power. The Commission used available data for scheduled charges at Adelaide, Cairns, Gold Coast, Darwin and Hobart airports, to help assess whether this finding was sound. Scheduled charges do not represent the actual charges that airlines negotiate with airports, but likely reflect the general trends and levels of charges at these airports.

Domestic scheduled charges at Adelaide, Darwin and Gold Coast airports have remained relatively flat or grown slowly in real terms since 2011, and at Cairns since 2014 (figure 5.11). Charges at Hobart Airport increased substantially in 2016 after several years of minimal change and have remained fairly constant in real terms since then.

There is little difference between domestic and international charges at Gold Coast Airport. In contrast, there has been a persistent gap of more than \$10 between the two charges at Adelaide and Cairns airports.

Although charges are only one element of airport performance, these relatively stable results provide further support to the conclusions in chapter 3 that the non-monitored airports do not have a level of market power that creates a *prima facie* case for regulatory intervention at this stage.

Figure 5.11 Scheduled charges at Australia’s non-monitored airports^{a,b}
Constant 2017 dollars



^a Airports with more than 2 million passengers per year. A time series of charges could not be obtained from public sources for Canberra Airport, and Canberra Airport declined to provide figures for publication. International charges are only shown at airports with scheduled international regular public transport services.
^b Excludes GST.

Source: Commission estimates based on scheduled charges from airport websites.

Discounting is unlikely to change general conclusions

The actual aeronautical charges that airlines pay are likely to be below scheduled charges. The AAA submitted that domestic aeronautical charges were discounted by about 24 per cent on average for nine of the largest airports, and international charges by about 10 per cent (sub. 50, p. 32). The AAA outlined the types of discounts made:

- temporary discounts to support the establishment of new routes or the expansion (either by increased frequency or larger aircraft) of existing routes – these are more common on international than domestic routes although a number of smaller regional airports are seen to be doing so;
- discounts for total passenger volume delivered by an individual airline or all airlines to the airport – these typically operate on a sliding scale and are more common in the domestic markets; and
- discounts in the form of penalties for poor service quality or late delivery of infrastructure by airports. (sub. 50, p. 32)

Discounts may be constrained by ‘no less favourable’ terms and conditions clauses in some commercially negotiated contracts between airports and airlines (chapter 4). The Commission was not able to obtain public data on discounts by specific airports over time.

However, on the basis of confidential information that it has viewed, the Commission considers it unlikely that discounts would materially alter the overall conclusions about trends and levels in aeronautical charges.

5.4 Profitability

An airport that does not achieve sufficient profits will struggle to attract capital to maintain its infrastructure or invest in new assets. However, profits that are persistently high can indicate that airport operators are exercising their market power by setting prices above the efficient level, with potential negative effects on downstream competition and consumer wellbeing through higher airfares and fewer services.

Reported measures of profit are typically scaled in some way, such as profit as a percentage of revenue or assets or (for airports) profit per passenger. In its annual monitoring reports, the ACCC presents operating profit margins (as a percentage of revenue and per passenger) and ROAA (operating profit divided by tangible non-current aeronautical assets) (refer to the glossary for technical definitions used in this chapter).

From an economic perspective, ROAA is a more informative measure of profitability than operating profit margins. However, some participants stated that IRR (which uses market value data) is preferable to ROAA because ROAA uses accounting data (ACCC, sub. DR158; Frontier Economics, sub. DR117). The concerns regarding ROAA versus IRR are discussed below.

ROAA represents the ‘opportunity cost’ of investing in aeronautical assets of an airport or investing in other commercial ventures that could be provided at the airport. Although operating profit margins adjust for size of the business, they do not directly account for differences between airports in the level and timing of investment. There is also no robust basis to determine whether a given operating profit margin is sufficiently high to be indicative of the exercise of market power.

Determining whether returns are ‘reasonable’ requires an estimate of the value of the aeronautical asset base and an assessment of the level of risk faced by airport financiers — both of these are highly contentious (chapter 4).

A high ROAA does not necessarily reflect that an airport has exercised market power. Profitability will vary from year to year, depending on where an airport is in the investment (and economic) cycle. When capacity is constrained at an airport, it may be efficient to set aeronautical charges above the cost of existing infrastructure to manage congestion. In this way, price and profitability increases can indicate that the existing asset base is not sufficient to meet demand and that new investment is required. Similarly, when new infrastructure is first built, the value of the asset base increases and ROAA would be expected to fall.

While price rationing and higher than anticipated demand can explain temporarily high profits, high profits should not persist unless airports are becoming fundamentally more risky

investments, or further capacity expansion is not possible. If an airport's risk profile is not changing and capacity expansions are possible, then any persistent increase in profitability above an efficient level may be the result of the airport exercising its market power.

Assessing returns on aeronautical assets

The weighted average cost of capital (WACC) includes the required rate of return to be earned by debt and equity providers. It is one element of building block models that airports and airlines use in their commercial negotiations over aeronautical charges (chapter 4). The higher the WACC, the higher the aeronautical charge needed to cover the cost of capital.

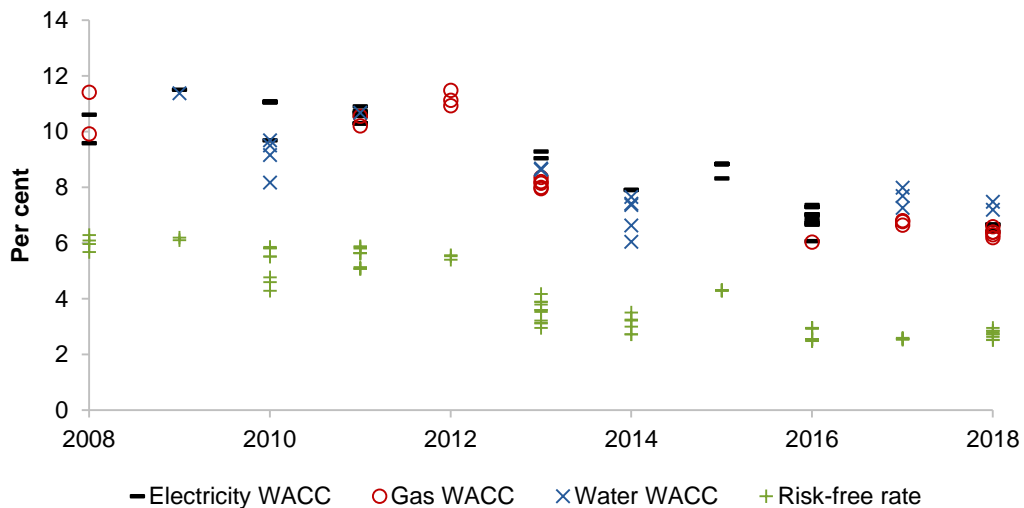
For some infrastructure services with natural monopoly characteristics, such as energy and water infrastructure, the WACC is set by a regulator as an indirect mechanism for preventing service providers from charging monopoly prices. The WACC that is set as part of a regulatory pricing determination is often controversial and requires some significant modelling assumptions. The precise methodology used to calculate a regulated WACC has changed considerably over the past twenty years in Australia (often due to Court rulings on regulatory decisions) and there remains active debate about many of the elements used to determine a regulatory WACC. There has been no Australian regulatory estimate of a benchmark rate of return for aeronautical services since the implementation of light-handed regulation in 2002, and the Commission does not consider that it is desirable to estimate a precise regulatory WACC for the current inquiry. Instead, it has assessed some of the elements that are used in estimating WACCs for infrastructure services and discussed how they have changed over time, and in comparison to other infrastructure services.

A major determinant of the WACC is the risk-free rate of return, which has been declining in recent years and is now at record low levels. Regulated WACCs have also fallen in Australia since 2008, broadly in line with changes in the risk-free rate (figure 5.12).

Changes in the commercial and regulatory environment relative to other types of businesses change the underlying risk of investing in airports, and these changes flow through to the WACC. Potential risks to airports include:

- changes to the economic and tourism outlook. This can have a significant effect on the cost of capital and result in passenger numbers that differ substantially from forecasts
- changes in the level of competition and countervailing power in downstream markets, such as airlines
- catastrophic risks — terrorism, disease outbreaks and aircraft disasters
- regulatory risks — changes to regulation and regulatory uncertainty.

Figure 5.12 Australian energy and water WACCs and the risk-free rate^a



^a Commission analysis of nominal pre-tax regulated WACCs and the risk-free rate used in regulatory determinations. Some WACCs are for the calendar year, but most are for the financial year ending 30 June.

Sources: Regulatory determinations by Australian Energy Regulator (AER various), Independent Pricing and Regulatory Tribunal of New South Wales (IPART various), Essential Services Commission (Victoria) (ESC various), Essential Services Commission of South Australia (ESCOSA various) and Economic Regulation Authority (Western Australia) (ERA various).

In the draft report, the Commission noted that these risks are likely to have remained relatively unchanged. In response, Qantas Group stated that an important reason as to why WACCs are falling (besides movement in the risk-free rate) is ‘... due to regulators taking a progressively stronger view that regulated companies’ risks are towards the bottom end of the empirical evidence’ (sub. DR115, p. 12). Given the incremental changes in the regulatory regime since 2002 it is likely that the regulatory risk has not increased and, if anything, may have decreased. However, any effect on the change in airports’ WACC is likely to have been small. The Qantas Group submission did not show any material differences between the change in the risk of airports and the change in the risk of other sectors over the past decade (sub. DR115). That means the reason for the absolute change in the WACC of airports and the other sectors would have been the same. From figure 5.12, the change in the WACC primarily reflects changes in the risk-free rate — not a change in risk.

It is also noted that regulatory stability has likely led to the increased investment seen at most airports. Cbus said that ‘regulatory stability is a key – if not the key – driver of new infrastructure investment’ (trans., p. 448).

The Transport Workers’ Union of Australia stated that airports are increasingly outsourcing aspects of their operations and that this reduces their exposure to risks.

The majority of airport functions are outsourced, which transfers most of the economic and financial risk to suppliers. This leads to airports often remaining profitable throughout economic

downturns while air-transport businesses (and their workers) are exposed to market volatility. (sub. 60, pp. 2–3)

The Commission agrees that some risks are shared between airports and their suppliers, but has not seen evidence that the primary sources of commercial and regulatory risk have changed materially in recent years.

In summary, the relatively unchanged regulatory and commercial environment since 2008 means the net effect on airports' cost of capital (and hence expected returns) is likely to have been small. The fall in the risk-free rate since 2008 has been much more significant and likely had a much greater effect on airports' WACC. On balance, airports' WACC should be about 3 percentage points lower in 2018 than it was in 2008.

'Line in the sand' asset values

The value of aeronautical (and whole-of-airport) assets is an important input into assessing airports' returns on assets and has been the subject of controversy since airport privatisation. The Commission reviewed airport services in 2006 and recommended drawing a 'line in the sand' at 30 June 2005 for asset valuations to ensure that upward asset revaluations do not affect measures of profitability in the ACCC monitoring report (PC 2007). The Commission stressed at the time that these asset values were intended as a simple set of asset valuation rules for monitoring purposes, rather than the set of asset values that must be used by airports in negotiating charges, which involve more complicated valuation considerations.

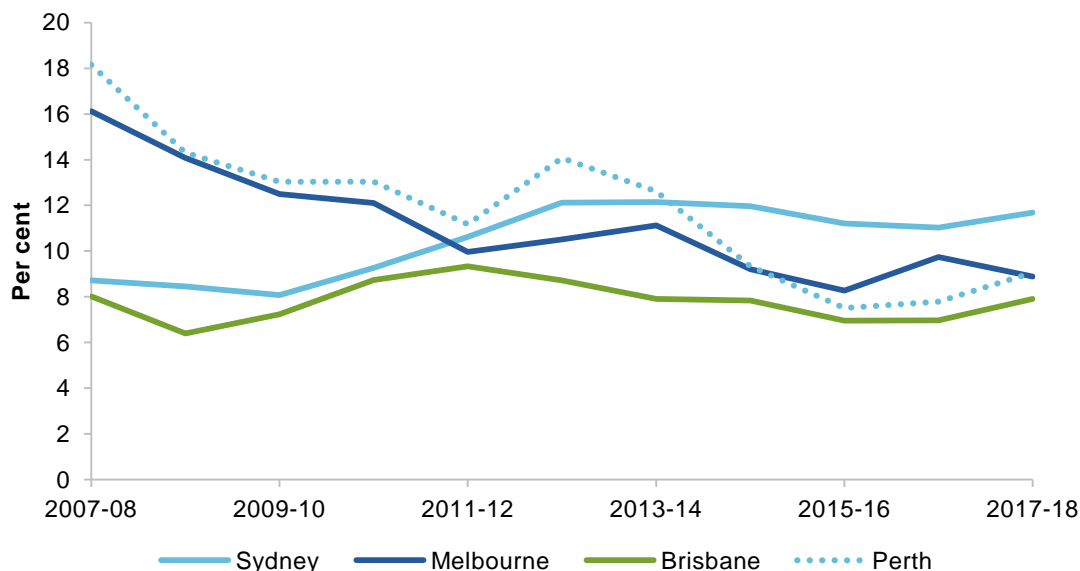
The 'line in the sand' was implemented in the 2007-08 ACCC monitoring report and all subsequent reports. Asset values at 30 June 2005 were taken as given and airports could include new assets on a cost basis as agreed between airports and airport users.

Return on aeronautical assets

The four monitored airports have had large variations in their ROAA over the period 2007-08 to 2017-18 (figure 5.13).

- Sydney Airport's ROAA increased from about 9 per cent in 2007-08 to about 11–12 per cent since 2012-13.
- Melbourne Airport's ROAA decreased from about 16 per cent in 2007-08 to less than 10 per cent for the past four financial years.
- Brisbane Airport's ROAA was relatively stable, seldom exceeding 8 per cent.
- Perth Airport's ROAA was about 18 per cent in 2007-08. After sharp falls it has stabilised to about 8–9 per cent in the past four financial years.

Figure 5.13 Return on aeronautical assets^a



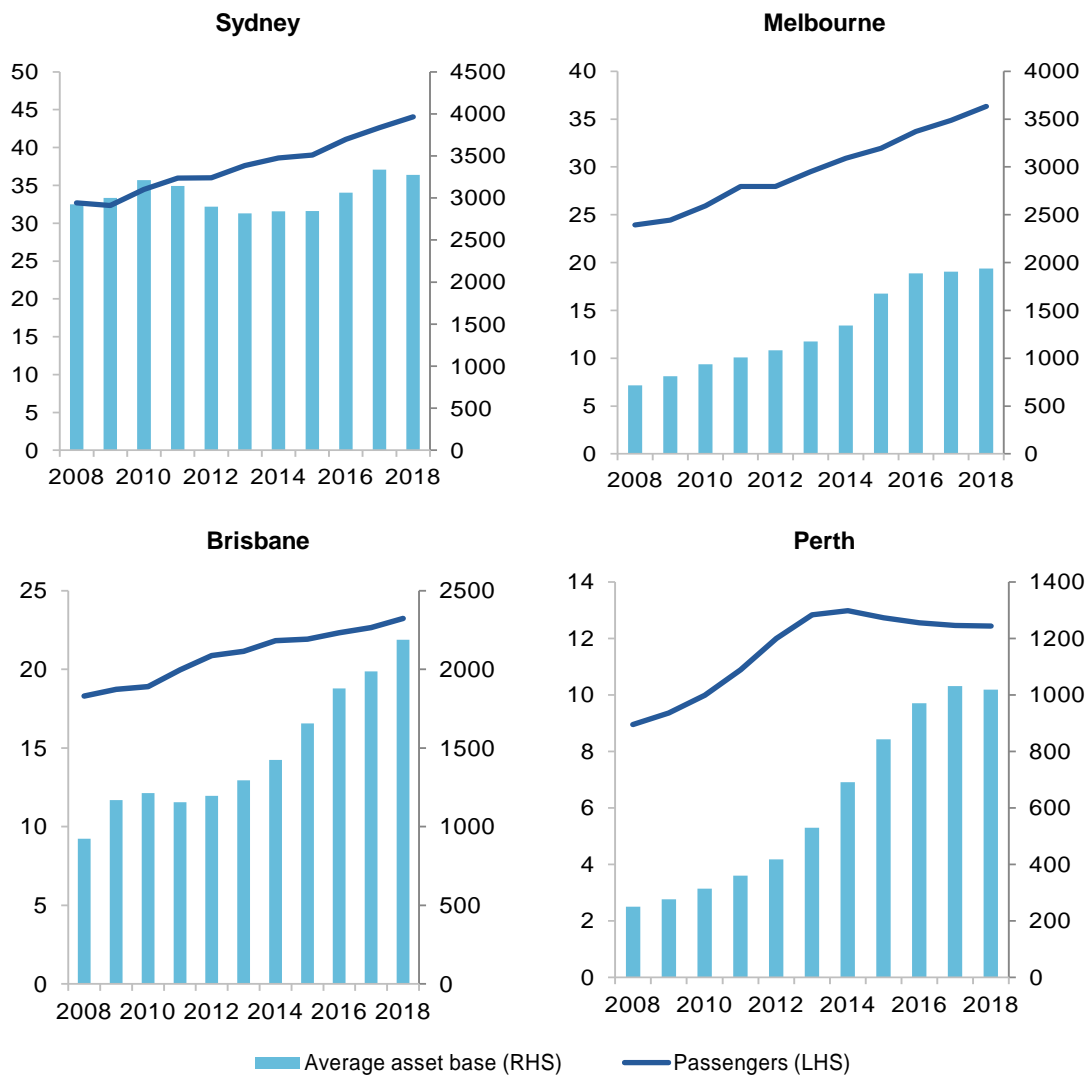
^a Returns were calculated using the 'line in the sand' asset values from the ACCC monitoring report. Asset base values are the average over the financial year.

Source: Commission estimates based on ACCC (2019).

ROAA is driven by the value of the asset base — not just profits. Although asset investment is lumpy, when assessed over a long time period it would be expected to increase with passenger demand. There have been large variations in the growth of aeronautical assets across the monitored airports over the past 10 years (figure 5.14).

- Sydney Airport's aeronautical asset base is much higher than the other monitored airports, but it has been stable. This likely reflects its more limited investment opportunities — it has less area to make major expansions to its terminals and runways than the other monitored airports. Coinciding with the relatively limited investment at Sydney Airport was the steady increase in passengers over the past decade (figure 5.14). This partly explains why its returns have risen in recent years.
- Melbourne Airport had more gradual investment, coupled with steady passenger demand growth.
- Brisbane Airport had significant investment in aeronautical assets. Much of this was due to expanding its international facilities.
- Perth Airport's aeronautical asset base more than quadrupled in value. This investment, coupled with declining passenger numbers following the end of the resources boom, led to the downward trend in Perth Airport's ROAA.

Figure 5.14 The monitored airports experienced different patterns of growth in their aeronautical assets and passenger base
 Aeronautical asset value (RHS, constant \$million 2018) and passengers (LHS, million), financial year



Sources: ACCC (2019); BITRE (2018a).

Other analyses of returns provided by participants to the inquiry

Some inquiry participants conducted their own analysis of airport profits using return on assets and similar, but alternative measures — return on equity and the IRR.

Airline participants cited research by the Grattan Institute that conducted a broad comparison of profits across many industries (A4ANZ, sub. 44, sub. 83; BARA, sub. 43; Qantas Group, sub. DR115). The Grattan Institute found that nearly half of the returns earned by airport

operators between 2010-11 and 2015-16 in Australia were supernormal profits. Two important considerations arise from that analysis.

- First, supernormal profits were determined as being the amount by which returns exceeded the cost of equity. The Commission considers that return on assets is a better measure of profitability than return on equity. It is consistent with how the ACCC collects the data for the monitored airports. Furthermore, the ACCC considers return on equity to be of limited value to airports, because of the significant debt that airport shareholders have, which can result in low bases of shareholder equity and hence variable rates of return of equity (ACCC 2017a).
- Second, profitability was assessed across the whole-of-airport operations. This likely leads to higher profits compared with analysis that focuses only on aeronautical assets. With the exception of Perth Airport (where returns on non-aeronautical and aeronautical assets are similar), returns on total airport assets are significantly higher than returns on aeronautical assets at the monitored airports. Returns on total assets were higher by about 25 per cent at Melbourne and Brisbane airports and nearly 50 per cent at Sydney Airport.

Frontier Economics presented analysis using IRR (and other profit measures to compare its results).² Frontier Economics stated that return on assets is reliant on using accounting data for asset values, which can be revalued. The Commission's timeframe for analysing return on assets occurs after the 'line in the sand' approach was implemented, thus ensuring that returns are not biased due to asset revaluations. Indeed, as noted above, the rationale for implementing the 'line in the sand' approach was to make changes in return on assets over time more meaningful. As the 'line in the sand' has now been implemented for some time, the observed trends in ROAA for each airport are more reliable.

IRR analysis requires more data and assumptions compared with using accounting data. This can influence results. For example, Frontier Economics prepared analysis for A4ANZ which estimated that Perth Airport's IRR was 13.9 per cent if its sale price was used for its opening value of its assets, or 26.8 per cent when book values were used (A4ANZ, sub. 83, appendix A, p. 5). In both cases market values were used as closing values, which were also estimated and based on factors including estimates of profit growth. These results demonstrate that IRR estimates can depend heavily on the assumptions used.

In contrast, although ROAA is a historical measure, the data used are more accurate (to the extent that the asset base is measured correctly).

Furthermore, return on assets is used by many regulatory bodies. The Australian Energy Regulator conducted a review to determine the best measure of financial performance for the electricity and gas businesses that it regulates. An independent scoping study that it requested for that review concluded that return on assets was at least as good, or a better measure than IRR, across each criteria assessed (McGrathNicol 2017). The report noted that

² Other profit measures were '... returns on assets, capital employed, or equity, and comparative margins' (A4ANZ, sub. 83, appendix A, p. 6).

return on assets did not require significant manipulation of data or assumptions, is easily understood and is able to be calculated consistently over time.

Operating profit margins

Operating profit margins are an alternative profit measure to return on assets. Operating profits can be measured on a per passenger basis or as a percentage of revenue. The Commission found similar outcomes for each measure, as they are strongly related to each other, so this section only discusses operating profit margins per passenger. Margins are calculated using earnings before interest, taxes and amortisation (EBITA).

Over the past decade, operating profit margins have been relatively stable at Sydney and Melbourne airports, but have increased at Perth and Brisbane airports in recent years (figure 5.15).

At Brisbane Airport, growth in revenue per passenger exceeded growth in costs per passenger, leading to its profit margin per passenger increasing from about \$4 in 2007-08 to more than \$7 in 2017-18. In contrast, increasing margins at Perth Airport in 2017-18 were primarily due to decreasing costs.

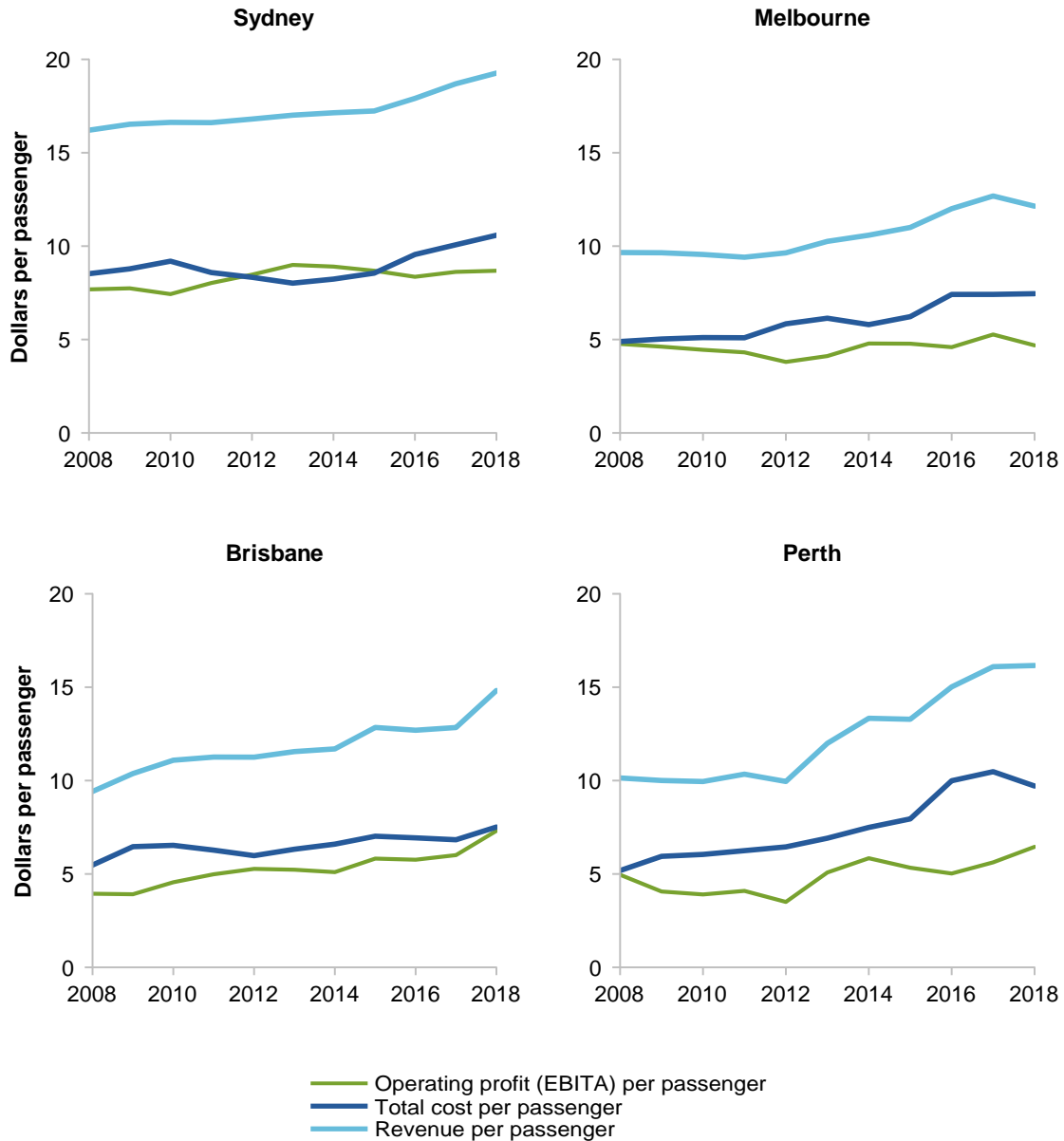
Operating profit margins have been consistently higher at Sydney Airport (\$7 to \$9 since 2007-08) than the other monitored airports, although as the next section demonstrates, there are significant limitations in comparing operating profit margins across airports.

Some caveats on using operating profit margins

Some participants argued that operating profit margins are excessive in Australia compared with overseas airports. For example, some showed that Australian airports had the highest operating profit margins, assessed using earnings before interest, taxes, depreciation and amortisation (EBITDA) (margins after deducting operating costs), among their samples of Australian and overseas airports (Air New Zealand, sub. 43; IATA, sub. 27; Qantas Group, sub. 48). Qantas Group also presented analysis using a different sample of airports, showing that Australian airports had relatively high operating profit margins when assessed using earnings before interest and taxes (EBIT) (margins after deducting operating costs, depreciation and amortisation).

Comparisons of an airport's financial performance using these measures have a number of caveats. First, it is common to report only whole-of-airport company profits in annual reports (profits for aeronautical and non-aeronautical services are not separated). The Commission considers that ROAA is more informative for assessing market power in aeronautical services. Whole-of-airport profits can be heavily influenced by the types of non-aeronautical activities that are reported in annual financial reports. For example, reports include earnings from retail leases and, in some cases, revenue from retail operations such as duty free stores.

Figure 5.15 **Aeronautical revenue, costs and operating profit margins**
Constant 2018 dollars, financial year



Source: Commission estimates based on ACCC (2019).

Even when aeronautical operating profit margins could be reliably calculated for a range of international airports, these measures have limitations as indicators of economic behaviour. Airports are capital intensive and profit margins excludes all capital costs. EBIT margins include depreciation of capital, but do not appropriately account for the opportunity cost of alternative investments or for the level and timing of investment. Bush noted that, because airports are so capital intensive, ‘... where individual airports sit in their investment cycles will be a major determinant of their operating margin requirements’ (sub. DR93, p. 10). Profit

analysis provided by the AAA and Frontier Economics also agreed that either return on assets or IRR is better suited to analyse profits than EBITDA.

5.5 Performance of the monitored airports

The Commission did not find strong evidence that the monitored airports have systematically exercised market power in aeronautical services to the detriment of the community. However, some findings present some cause for concern. A summary of each airport follows.

Sydney Airport is profitable and efficient

Sydney Airport faces physical and regulatory constraints — it has limited space to expand and its operations are constrained by regulatory caps on aircraft movements and a curfew. These constraints and strong passenger growth have led to some congestion at peak times, but Sydney Airport continues to operate efficiently. Its aeronautical operating costs per passenger are the lowest of the monitored airports, and it has very low whole-of-airport operating costs when compared with most overseas airports. Similarly, it processes a large number of passengers for the number of gates and runways it uses. Passengers rated Sydney Airport's service quality relatively well, although airlines rated it poorly. International airlines commented that there was scope for improvement in areas such as on-time performance, baggage handling, bussing and the management of foreign object debris (BARA, sub. 42, sub. DR92). Sydney Airport stated that it is working with airlines to improve on-time performance, baggage handling and foreign object debris (sub. DR181).

Aeronautical charges for domestic services at Sydney Airport are higher than those for Melbourne and Brisbane airports, but are not particularly high by international standards and have been relatively stable (in real terms) in recent years. Charges for international services increased more rapidly and are high when compared with overseas airports. Most of the growth in revenue per passenger is attributable to the combined effects of increasing international passenger charges, coupled with an increasing share of international passengers.

The divergence in growth rates between international and domestic charges could reflect the higher levels of competition, and lower levels of airline countervailing power, in the downstream market for international air transport (chapter 3). It could also be explained by the higher capital and operating costs of providing international aeronautical services. Sydney Airport stated 'charges for international passengers are necessarily higher to reflect the higher capital and operational costs associated with facilitating those passengers' (sub. 53, p. 96). Sydney Airport further stated that its international charges are the result of the price structure and asset value set by the ACCC when it was privatised, which reflected many factors, including the cost of the land and investment leading up to the Sydney Olympics (sub. DR112, trans., p. 219).

Sydney Airport is a highly profitable business. In the past four years it earned the highest ROAA of the monitored airports (11–12 per cent), which could present cause for concern about the exercise of market power when considered in isolation. The Commission does not consider these profits to be a result of the systematic exercise of market power for a number of reasons.

First, the long-lasting nature of airport assets and the inherent lumpiness of their investment schedules means that returns in a single year have little value as evidence. Taking a ten-year timeframe to better account for cyclical factors and lumpy investment, Sydney Airport's ROAA averaged about 10 per cent per year — less than Melbourne and Perth airports, which averaged about 11 and 12 per cent per year, respectively. Second, the level of returns at Sydney Airport also reflect its limited opportunities to invest, due to land and regulatory constraints. Passenger demand has grown more rapidly than the asset base, which has led to increasing returns on its existing assets. In the past 10 years, the value of Sydney Airport's asset base increased by about 10 per cent in real terms. In contrast all of the other monitored airports at least doubled their asset base.

Further, Sydney Airport's ROAA is measured in a different way to other monitored airports. Sydney Airport stated that it uses a real WACC and asset base indexation when setting prices (in line with its privatisation model), while the ACCC's method of calculating ROAA uses a nominal WACC and no asset base indexation (in line with the model used when the other monitored airports were privatised) (sub. 53). The use of asset indexation does not affect the long-term present value of aeronautical investments but results in a more stable price path over time. As a consequence, prices are lower when new investments are first commissioned but are higher in later periods than if the nominal method had been used. Sydney Airport estimated '... that the ACCC overstates our [Sydney Airport's] returns by between one-and-a-half to two per cent relative to the other airports today' (trans., p. 219). Furthermore, this discrepancy will increase over time.

Sydney Airport's ROAA could continue to increase if current regulatory constraints remain in place and demand for Sydney Airport's aeronautical services continues to grow. With scarce capacity, increasing charges could be an efficient way to ration access to services (chapter 2), so increasing returns will not necessarily indicate the airport is exercising its market power. The addition of Western Sydney Airport will affect Sydney Airport's future passenger growth and put competitive pressure on Sydney Airport's charges, revenues and profits.

Sydney Airport clearly belongs in the monitoring regime — it has significant market power and its ROAA and aeronautical charges for international services are currently relatively high. However, many factors have influenced its performance, including lumpiness of investment and physical and regulatory constraints. More information on domestic and international costs would help determine whether high international charges reflect higher costs of servicing international passengers. Taken as a whole though, the indicators of Sydney Airport's performance do not suggest that it has systematically exercised its market power in aeronautical services.

Melbourne Airport has invested to deal with growing demand

Melbourne Airport had the highest passenger growth of the monitored airports. International passenger numbers have more than doubled over the past decade, which meant they went from comprising about 20 per cent of all passengers in 2007-08 to about 30 per cent in 2017-18. International passenger numbers grew more slowly at the other monitored airports, although international passengers continue to make up a greater share of passengers at Sydney and Perth airports than at Melbourne Airport.

Meeting this growth has required continued investment, including new and upgraded terminal infrastructure. Melbourne Airport has a relatively high level of operational efficiency — the airport uses its assets intensively and has low costs. On balance, it also delivers good service quality relative to overseas airports, as rated by passengers. However, on-time performance at Melbourne Airport fell to its lowest point in the past eight years, and airlines suggested that improvements in scheduling to capacity, baggage handling and bussing services are warranted (BARA, sub. 42, sub. DR92).

Revenue per passenger has risen in line with increased costs and changes in the passenger mix. Melbourne Airport is serving an increasing share of international passengers and earns higher revenue from those passengers than domestic passengers. Relative to overseas airports, Melbourne Airport has mid-range international charges and low domestic charges. Melbourne Airport stated that ‘... there is a higher cost to serve [international passengers] and charges are therefore higher’ (sub. 33, p. 148).

Melbourne Airport’s ROAA has averaged about 11 per cent since 2007-08 — lower than Perth Airport but higher than Sydney and Brisbane airports. Substantial investment at Melbourne Airport came with a decline in profitability — the airport’s ROAA decreased from about 16 per cent in 2007-08 to less than 10 per cent for the past four financial years. This investment is not consistent with the airport attempting to limit capacity to raise its prices. Indeed Melbourne Airport had a decline in aeronautical profits in 2017-18, due to a reduction in scheduled charges which led to a fall in revenue per passenger. This occurred despite strong passenger growth.

Trends in Melbourne Airport’s aeronautical charges do not reflect the systematic exercise of market power. Although international charges have increased somewhat faster than domestic charges, they are in line with overseas airports and are unlikely to reflect the systematic exercise of market power. Overall, the Commission is satisfied that Melbourne Airport has not exercised its market power in aeronautical services to the detriment of the community.

Brisbane Airport has high international charges but moderate profitability

Brisbane Airport’s scheduled aeronautical charges for international services are the highest of the monitored airports, and are also high when compared with overseas peers. It had a large increase in international charges in 2009 and again in 2017 and 2018. In contrast,

domestic charges at Brisbane Airport increased much more slowly. These differences could be due to one or more of the following factors.

- Exercise of market power for international aeronautical services — Brisbane Airport likely faces a higher level of competition in the domestic market than the other monitored airports (from Gold Coast and Sunshine Coast airports), but less competition in the international market (chapter 3). This limits its ability to raise prices for its domestic aeronautical services, relative to its international aeronautical services.
- Divergence in costs to process domestic and international passengers — it costs more to service international passengers than domestic passengers, and this difference might have exacerbated in recent years. Brisbane Airport's total costs per passenger increased markedly, rising by 37 per cent in real terms since 2007-08. Better cost data on the split between the costs of servicing international and domestic passengers is required to determine how much of Brisbane Airport's cost increase was due to an increase in the costs of servicing international rather than domestic passengers.
- Recovery of investment costs — related to the above point, the large increases in international charges may have been justified to recover the costs of its recently expanded international terminal building and associated apron and aircraft parking facilities.

In response to the draft report, Brisbane Airport justified its international charges as being reflective of recent investment in international terminals and runway capacity.

The quantum of the international charges at Brisbane Airport primarily reflect the significant investment in the expansion of the international terminal building itself in 2007 and 2008, and more recently in 2015 and 2018. It also reflects major investment in the associated aprons in the international terminal, and the runway system. The capacity investments we have made reflect the peaky-ness of the international demand at Brisbane Airport with most international services landing during the morning peak. (Brisbane Airport, trans., p. 228)

The timing of the investment cycle also influences prices. Brisbane Airport said that its charges will remain flat, or decrease in real terms in the next few years (trans., p. 228).

Although Brisbane Airport's international charges were relatively high, it performed better on other indicators. Its total costs per passenger increased significantly from 2007-08 to 2017-18, but were much lower than Sydney and Perth airports. Brisbane Airport's overall service quality rating was the highest of the monitored airports in 9 of the past 11 years according to ACCC monitoring, although its average airline rating has been trending downwards. Its utilisation of some capital inputs is low (for instance, it has a large number of gates and terminal area given the number of passengers it services), but this can at least partly be explained by the fact that it has not experienced the high growth in international passengers that the other monitored airports have. It also likely reflects the timing of the investment cycle with large investment having occurred recently (as noted above), which will reduce input utilisation in the short-term.

In any case, high international charges have not translated into higher profitability, with Brisbane Airport's ROAA seldom exceeding 8 per cent in the past decade. Its moderate

profitability performance and high charges would be more of a concern if they were coupled with poor operational performance but, as this is not the case, there is no suggestion that market power is being exercised at Brisbane Airport.

Perth Airport's performance can be explained by investment decisions

Perth Airport invested more heavily than the other monitored airports. It opened a dedicated regional terminal in 2013 and a new domestic pier in 2015. However, unlike the other monitored airports, there was a fall in passenger numbers at Perth Airport following the end of the resources boom. This decline was unexpected at the time of Perth Airport's most recent (2014) master plan, which forecast annual increases in passenger numbers for 2015 and onwards (Perth Airport 2014). (About 14.3 million passengers used the airport in 2017-18 — 13 per cent below the master plan forecast of 16.4 million passengers.)

The investment in new infrastructure has led to mixed performance on different indicators of operational efficiency. Perth Airport's investments resulted in the greatest improvement in the ACCC's quality of service ratings since 2011-12, largely because of an improvement in survey ratings from airlines. In 2015, when announcing the opening of the new domestic terminal for Virgin Australia Group, its CEO said that it will '... provide access to twice the number of departure gates, with the ability to board up to twelve aircraft at one time, offering a world-class gateway for regional, domestic and international travel' (Virgin Australia 2015). Perth Airport had the highest ACCC overall service quality rating and airline rating in 2017-18.

The combination of large investments and falling passenger numbers partly explains why Perth Airport had the highest operating costs per passenger and the lowest rate of input utilisation of the monitored airports. As passenger growth recovers, Perth Airport's infrastructure will begin to be more efficiently utilised. Furthermore, its efforts to reduce costs have seen operating costs fall in the past two years. Perth Airport's whole-of-airport operating costs per passenger are in line with overseas airports.

Perth Airport displays different trends in aeronautical charges to the other monitored airports. Recent investments were accompanied by a more than 100 per cent increase in domestic scheduled charges from 2011-12 to 2016-17, while international charges increased by 33 per cent. Over this period, revenue per passenger increased at a compound average growth rate of over 10 per cent per year. This increase was moderated by changes in the passenger mix — the share of international passengers increased, but international charges were lower than domestic charges, which dampened the overall effect.

Perth Airport (sub. 51, p. 46) stated that the large increase in domestic charges from 2012 was to fund the construction of two new terminals and major expansions to a third terminal, and that domestic charges were reduced by 39 per cent in real terms in 2018-19. The increase in charges is somewhat correlated with its increased operating costs. This suggests that at least part of the increase in charges can be attributed to efficient pricing.

Investment has also influenced Perth Airport's ROAA. The airport's aeronautical asset base quadrupled in real terms from 2007-08 to 2017-18, with significant terminal expansions. This investment, combined with lower passenger numbers in recent years, contributed to Perth Airport's ROAA falling from 18 per cent in 2007-08 to 9 per cent in 2017-18.

As noted in chapter 3, Perth Airport likely has less market power than Melbourne and Sydney airports, and analysis of its performance suggests that it has not systematically exercised any market power that it does have. Perth Airport's overall performance can be partly explained by substantial investments and changes in passenger demand in response to the resources boom. As noted above, some of the investments undertaken by the airport were supported by airlines and, to the extent that they were completed at a reasonable cost, these findings do not suggest that Perth Airport has exercised its market power.

No systematic problem but airport performance requires more scrutiny

Overall, the evidence does not suggest that the monitored airports have systematically exercised their market power in aeronautical services to the detriment of the community. Some financial indicators could be consistent with the exercise of market power, when taken in isolation. In particular, the high international charges at Sydney and Brisbane airports, Sydney Airport's profitability, and the high operating costs at Perth Airport show that there is reason to remain vigilant.

On balance, most indicators of operational efficiency (including costs and service quality), aeronautical revenue and charges, and profitability are within reasonable bounds. Each airport has generated returns sufficient to enable investment while not earning excessive profits, and passengers consider airports to have good service quality. There is no justification for significant change to the current form of regulation of aeronautical services at these airports. The Commission is, however, recommending improvements to the monitoring regime to enhance transparency over airports' operations and to more readily detect the exercise of market power (chapter 9).

FINDING 5.1 AIRPORTS ARE NOT SYSTEMATICALLY EXERCISING THEIR MARKET POWER

Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) have significant market power in aeronautical services, but they have not systematically exercised their market power to the detriment of the community. There is no justification for significant change to the current form of regulation of aeronautical services at any of these airports at this time.

Relatively high international charges at Sydney and Brisbane airports give reason to remain vigilant. More specific data on costs and revenues for international and domestic aeronautical services provided at the monitored airports would allow greater scrutiny of airport performance (Recommendation 9.4).

6 Car parking and landside access

Key points

- The price of airport car parking attracts considerable public attention. The evidence, however, shows that the price of car parking at airports is consistent with the fixed and variable costs of providing car parking services (including the opportunity cost of land), the need to manage congestion at highly sought after parking facilities, and the value users place on the convenience of parking within a short walk to the terminal.
- The supply of car parking at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) has increased significantly and the quality of service continues to be acceptable according to users. Operators of these airports have not sought to restrict the supply of car parking to inflate their prices.
- The range of substitutes for on-airport car parking has increased since the monitored airports were privatised and now includes ridesharing, a higher number of off-airport car parks and designated waiting facilities for meeters and greeters. The greater availability of substitutes reduces the ability of airport operators to increase the prices they charge for on-airport car parking.
- Airport operators provide, for a charge, landside access to terminals for taxis, buses servicing off-airport car parks and other ground transport operators. Airports have an incentive to limit competition from landside operators where this could lead to increased demand for on-airport car parking.
- The structure of landside access charges appears to be consistent with efficient operations. The Commission, however, is unable to be definitive on whether landside access charges are above efficient levels due to inadequate data.
- Reported quality of service for landside access has been within a reasonable range at the monitored airports and has not deteriorated despite increased demand for kerbside space over time. In addition, airports have provided facilities for new ground transport services. This suggests that airport operators have not underinvested in landside access services.
- Participants raised concerns about airports' behaviour in negotiations with landside operators when setting charges and other terms of landside access. Airport operators have argued (supported by evidence) that they consult with operators when setting terms of access for landside areas. Bilateral negotiations for bespoke arrangements are not always practical where a large number of individual operators access common-user infrastructure and services. Also, it is not always possible to reach an outcome that is preferred by all parties given limited forecourt space and the safety and efficiency objectives of airport operators.
 - The Commission considers that airport operators have not systematically exercised market power in negotiations with landside operators, based on the evidence available.
- The monitoring regime for car parking and landside access should be enhanced by collecting more detailed data to inform future assessments of the exercise of market power.

Airports own and operate at-terminal car parks and at-distance car parks (which have shuttle bus connections to terminals). Airports also control landside access for other ground transport options including taxis, hire cars and shuttle buses for independent off-airport car parks. Their monopoly on access to terminals provides airport operators with market power in at-terminal parking and landside access, which they could exercise through:

- setting car park and landside access prices above an efficient level
- restricting competition from landside services by denying access or setting unreasonable terms of access to service providers
- inadequate investment in infrastructure and operational aspects of services, which could affect service quality.

This chapter sets out the Commission’s assessment of whether airports with significant market power — Sydney, Melbourne, Brisbane and Perth (the monitored airports) — have exercised their market power in car parking and landside access to the detriment of the community. As discussed in chapter 3, airports outside the monitoring regime, including regional airports, do not have significant market power.

6.1 Ground transport options

Passengers have a range of options when travelling to and from an airport, including private car, taxi, car rental, chauffeured services, private bus and public transport (table 6.1). At some airports, passengers can use rideshare services, such as, Uber, Didi and Ola and car share services, such as, GoGet.

A high proportion of airport users at the monitored airports use private vehicles to access airports. Some park at the airport or in an independent off-airport car park. Others are picked up or dropped off by family or friends who use at-terminal car parks, kerbside drop-off and pick-up facilities or designated waiting areas (table 6.2).

Airport operators provide at-terminal and at-distance car park facilities within the airport precinct (on-airport). At-terminal car parks are located a short walk from terminals and are generally designated for short-term users, and offer covered and valet parking. (Qantas and Virgin also provide at-terminal valet parking at the monitored airports). At-distance car parks require the user to catch a shuttle bus to the terminal, are designated for long-term users and have limited amenities.

Table 6.1 Estimated use of ground transport options

Per cent of passengers

	Sydney ^a	Melbourne ^b	Brisbane ^b	Perth ^c
Kerbside pick up/drop off ^d	23	37	45	33
Car parking (on-airport)	7	14	14	40
Taxi	19	19	11	11
Rideshare	8	..	3	..
Train	24	..	na ^e	..
Bus (private and public)	17	19	13	2
Bus (off-airport car park operators)	na	4	4	na
Car rental	2	3	8	5
Other ^f	na	4	1	9

^a Data are for 2017. Bus (private and public) category includes limousine services and off-airport car park operators. ^b Data are for 2016-17. ^c Data are for 2014-15. Kerbside pick up and drop off includes taxi drop offs. Taxi only includes pick ups. ^d Refers to the use of free kerbside pick-up and drop-off areas by family and friends, and may include drop offs or pick ups by ground transport operators. ^e Use of train is not separately reported and is included in kerbside pick up and drop off. ^f Includes all other transport modes, for example chauffeured services. **na** Not available. **..** Not applicable

Sources: Brisbane Airport (pers. comm., 21 January 2019); Melbourne Airport (sub. 33, p. 126); Perth Airport (sub. 51, p. 68; pers. comm., 15 November 2018); Sydney Airport (sub. 53, Appendix 9, p. 16).

Independent off-airport car parks are generally located outside the airport precinct and provide a shuttle bus to and from the airport. Car park operators have agreements with airport operators to enable them to pick up and drop off customers near the terminal for a fee. The number of off-airport car parks around each monitored airport has increased since they were privatised. There are at least 19 off-airport car parks in Melbourne, seven in Sydney, five in Brisbane and five in Perth.

Table 6.2 Options for meeters and greeters close to the terminal

	Sydney ^a	Melbourne ^b	Brisbane ^c	Perth ^d
Kerbside drop off and pick up	Free	Free	Free	Free
Waiting area				
<i>Domestic</i>	First 15 minutes free	First 10 minutes free	First 30 minutes free	First 10 minutes free
<i>International</i>	First 15 minutes free	First 10 minutes free	First 10 minutes free	First 10 minutes free

^a Sydney Airport offers one hour free parking at its at-distance car park. ^b Melbourne Airport offers a 20 minute free waiting zone located close to the at-distance car park. ^c Brisbane Airport offers one hour free parking at its at-distance car park. ^d Perth Airport offers one hour free parking at its at-distance car park.

Sources: Brisbane Airport (sub. 38, appendix B, p. 31); Melbourne Airport (sub. 33, p. 131); Perth Airport (sub. 51, appendix 2, p. 18); Sydney Airport (sub. 53, appendix 9, p. 25).

6.2 Car parking

The extent of airports' market power in on-airport car parking

The extent of an airport operator's market power depends on whether good substitutes are available for on-airport (at-terminal and at-distance) car parking. This in turn depends on the nature of demand for the service and consumers' ability to choose alternative providers or services should prices change (chapter 3).

Data from the monitored airports show that there are two types of airport car park users — short-term and long-term. The characteristics of these user groups could influence their willingness to use substitutes. For example, business passengers tend to be more time sensitive than leisure travellers (Gupta, Vovsha and Donnelly 2008; Roh 2013; Tam, Lam and Lo 2011). For business passengers, transport options that are reliable and convenient could be effective substitutes for at-terminal car parking. Airport operators could have some market power in providing services to this group of consumers where there is no reliable alternative to at-terminal car parking.

Alternatives for users of at-terminal and at-distance car parks

Short-term users, who park for less than three hours, accounted for over three quarters of at-terminal car park users at the monitored airports in 2017-18 (Commission estimates based on data provided by the monitored airports). These people are generally 'meeters and greeters', not airline passengers.

Short-term users value proximity to terminals. Their alternatives to at-terminal parking include kerbside drop off and pick up and free waiting areas (table 6.2). The availability of substitutes for short-term users has increased at most monitored airports since 2011 and improved technology (for example, smartphones and flight tracking) has made these substitutes more practical for meters and greeters. Airports stated that they have also increased access to alternatives to at-terminal car parking to manage congestion in the terminal precinct.

We've also invested in the free options ... That's been driven really to reduce congestion and to provide passengers with choice and better and safe access to and from the airport. (Melbourne Airport, trans., p. 356)

These options are imperfect substitutes for at-terminal car parks, but they put some constraint on airport operators' market power in at-terminal car parking. If airports increase at-terminal car parking prices significantly, some short-term users would switch to alternatives, such as kerbside pick up and drop off (Melbourne Airport, sub. 33; TRB 2010). Melbourne Airport, for example, stated that competition from alternatives led to price increases being reversed for at-terminal car parking in 2018 (sub. 33).

Most users of at-distance car parks are airline passengers who park their vehicle at an airport for the duration of their trip. The range of substitutes for long-term users of airport car

parking has increased since the monitored airports were privatised, and now includes ridesharing, car share, trains (at Sydney and Brisbane), and a higher number of off-airport car parks. The availability of substitutes is a constraint on airport operators' market power in at-distance car parking.

The monitored airports have more market power in at-terminal car parking than in at-distance car parking. This is because airports are the only providers of at-terminal car parking and there is no alternative for people who want the convenience of parking within a short walk of the terminal. Airport operators face greater competitive constraints for at-distance car parking.

Are airport operators exercising market power in on-airport car parking?

Airport operators could exercise their market power in on-airport car parking by: setting prices above efficient levels; or underinvesting in facilities to intentionally restrict the supply of car parks to create scarcity rents, leading to poor service quality. The Commission has examined on-airport car park prices at the monitored airports and the factors that drive those prices. It has also considered the available evidence on infrastructure investment, car park utilisation and quality of service.

The Commission has drawn on information from the Australian Competition and Consumer Commission (ACCC) monitoring reports, including:

- operational indicators (number of on-airport car park spaces and car throughput)
- financial indicators (prices, revenues, expenses, investments and profits)
- passenger reports of quality of facilities (availability, standard and time taken to enter the car park).

Most of the data are provided to the ACCC by airport operators. The data on the quality of car parking facilities are collected through passenger surveys (chapter 5).

On-airport car park prices and their drivers

The price of on-airport car parking attracts substantial public attention, partly because 'it is very apparent to consumers how much they pay for the service' (ACCC, sub. 59, p. 43). Some car parking prices at the monitored airports fell over the period 2010-11 to 2017-18, while others increased (table 6.3). The question for this inquiry is whether the prices of car parking at the monitored airports are consistent with efficient prices. The fact that the price of parking for one hour at Brisbane Airport is \$17 and at Perth Airport is \$13 does not necessarily mean Brisbane Airport is exercising its market power in car parking. Both prices may be efficient given the differences between the two airports — there is no one 'right' car parking price across all airports.

Table 6.3 Price of parking at the monitored airports

Prices in 2017-18 dollars

	<i>At-terminal^a</i>				<i>At-distance</i>	
	<i>\$ one hour</i>		<i>\$ one day</i>		<i>\$ one day</i>	
	2010-11	2017-18	2010-11	2017-18	2010-11	2017-18
Sydney	17.23	19.00	59.74	61.00	28.72	34.00
Melbourne	13.79	12.00	59.74	51.00	33.32	25.00
Brisbane	14.94	17.00	40.21	55.00	23.84 ^b	20.00
Perth	6.43	13.00	41.36	48.00	18.38	26.00

^a Prices are average drive up prices for both domestic and international car park facilities. ^b The price refers to 2015-16, Brisbane Airport did not have an at-distance car park prior to 2015.

Sources: ACCC (2019, pers. comm., 20 March 2019).

The conceptual benchmark that the Commission has used as a starting point is the long-run average cost of providing car parking. This includes the capital and operating costs of car parking, and the opportunity cost of the resources required to provide the service (chapter 2). The long-run average cost of parking is a useful starting point. There are, however, at least two reasons for price to be above long-run average cost that are consistent with efficient pricing and not indicative of the exercise of market power: scarcity rents and locational rents.

Scarcity rents (also called congestion rents) can arise where there are capacity constraints. In these circumstances, rationing car park spaces by increasing prices above the long-run average cost of providing those spaces can be an efficient way to allocate a scarce resource to the consumers who value it most. Setting prices above long-run average cost to manage congestion creates scarcity rents that can lead to super-normal profits, but are not the direct result of an exercise of market power. A complication in any discussion of scarcity rents is that *deliberately* underinvesting in infrastructure to constrain capacity can lead to congestion and scarcity rents that boost airport profitability, but have costs to the community (discussed below).

Locational rents reflect the premium consumers are willing to pay to access limited car parking space close to terminals (ACCC, sub. 59). Prices that include locational rents can also be consistent with efficient pricing.

The Commission examined factors that could explain on-airport car park prices — capital and operating costs, the opportunity cost of land, and scarcity and locational rents.

Capital and operating costs

The price of parking should, at a minimum, include the recovery of capital and operating costs of providing the service. Capital and operating costs for at-terminal and at-distance car parking are significantly different. At-terminal car parks are generally multi-storey buildings

that provide covered parking, security services such as CCTV, and offer premium parking services such as valet. At-distance car parks tend to be paved areas with few, if any, structures and do not provide the same amenities as at-terminal car parks. Car parking price data for at-terminal and at-distance car parks (table 6.3) and off-airport car parks (table 6.4) show that it costs more to park in car parks with better amenities.

Table 6.4 Prices of off-airport car parks^a
For 7 days, covered and uncovered

	<i>No cover</i>	<i>Cover/shaded</i>	<i>Premium</i>
	\$	\$	%
Sydney off-airport	115	146	26
Melbourne off-airport	73	94	29
Brisbane off-airport	67	95	42
Perth off-airport	106	140	33

^a Prices represent an average of the price charged by off-airport car park operators.

Source: Commission estimates using prices listed on car parks' websites.

The ACCC does not collect data on car parking capital expenditure but does report on selected investments in car parking for the monitored airports. For example, the ACCC reported that in 2015, Melbourne Airport completed a new multi-level car park that increased the capacity of at-terminal car parking by 2800 spaces (ACCC 2017a). Similarly, the ACCC reported that between 2013 and 2015, Perth Airport expanded its at-terminal and at-distance car parks at Terminal 1 and Terminal 2 (ACCC 2015). Since 2011, the monitored airports have also undertaken investments to increase quality, such as installing parking guidance technology or CCTV security.

The ACCC reports operating costs of car parking at monitored airports. ACCC data show that since 2010-11 operating costs per vehicle have increased at the monitored airports (figure 6.1).

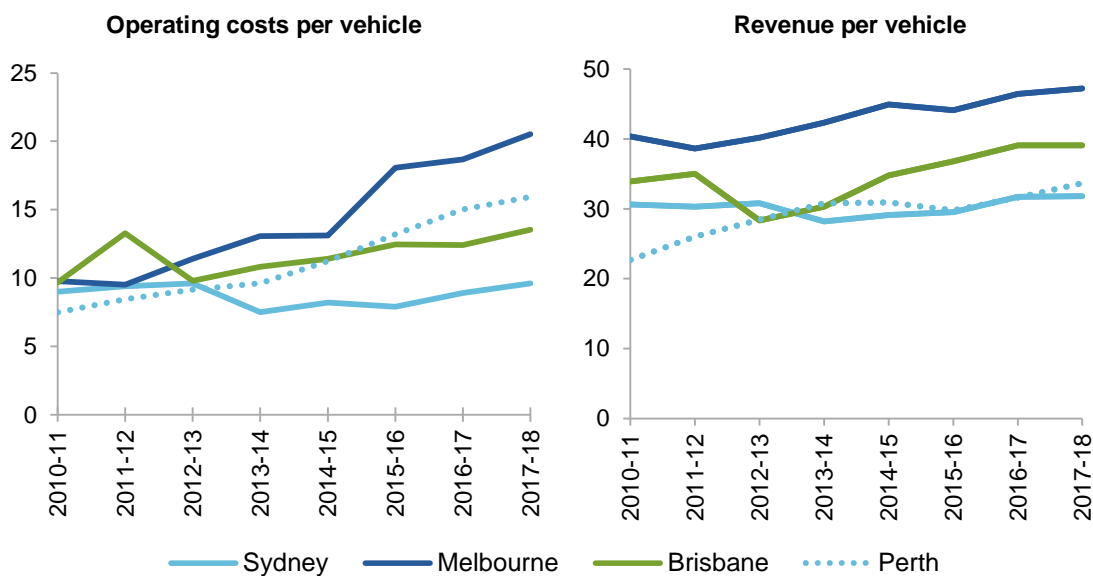
An airport exercising its market power might allow its operating costs to increase over time. Operating cost per vehicle could also increase at an airport that is operating efficiently, and are driven by a number of other factors.

- Improvements in the quality of service over time. For example, CCTV security could entail higher labour costs.
- Offering greater choice in parking services could also entail higher operating costs. The choice in parking services at the monitored airports has increased over time and now includes premium or guaranteed spaces and valet parking.
- Changes in cost allocation methodology. For example, Melbourne Airport changed its cost allocation methodology in 2015-16, which could partly explain the increase in its operating costs (figure 6.1) (ACCC 2017a).

- The demand for car parking services at some airports has changed. The number of cars entering and exiting car parks at Perth and Melbourne airports, for example, declined between 2010-11 and 2017-18 (discussed below). Many costs, such as utility costs, do not change with the number of users, which could explain the increase in operating costs per vehicle at these two airports.

Operating costs for at-terminal and at-distance parking are not reported separately. This is a limitation of the monitoring regime that has prevented the Commission from scrutinising whether changes in the price of, say, at-distance car parking can partly be explained by the changes in the costs of providing those services.

Figure 6.1 Operating costs and revenue, per vehicle
2017-18 dollars



Source: ACCC (2019).

Airports would seek to recover increased costs through price rises even in highly competitive markets. The data show that revenues per vehicle have grown at a significantly lower rate, relative to operating costs. For example, between 2010-11 and 2017-18, revenue per vehicle at Melbourne Airport increased by 17 per cent, whereas operating costs per vehicle more than doubled, in real terms. Similarly, at Brisbane Airport revenue per vehicle increased by 15 per cent, while operating costs per vehicle increased by 40 per cent. (It should be noted that the growth in revenue per vehicle could reflect higher prices, but also cars being parked for longer periods of time, or motorists choosing higher-cost parking services). The magnitude of change in operating costs and revenues implies that between 2010-11 and 2017-18 operating profits per vehicle have declined at some airports or have remained steady.

The opportunity cost of airport land

Efficient prices reflect the opportunity cost of resources. Airports argued that the opportunity cost of land near terminals is high because it could be rented out for other higher yielding uses such as, hotels or retail space. HoustonKemp was commissioned by Sydney, Melbourne, Brisbane and Perth airports to provide a market power assessment relating to car parking and ground access. HoustonKemp estimated that the value of the land used for car parks at Sydney, Melbourne, Brisbane and Perth airports has increased since 2013 (Brisbane Airport, sub. 38, appendix B, p. 46; Melbourne Airport, sub. 33, attachment, p. 31; Perth Airport, sub. 51, appendix 2, p. 33; Sydney Airport, sub. 52, appendix 9, p. 43).

In 2011, the ACCC acknowledged that some airports face physical constraints to provide more parking spaces and that the opportunity cost of land at Sydney Airport is likely to be higher than at the other airports.

It is unclear if *Sydney Airport* has reached capacity limits for car parking that is close to the airport terminals. If the airport cannot technically provide more spaces, the margins received by Sydney Airport for car parking may be more reflective of locational advantages. Further, it is expected that the opportunity cost of land — that is, the value of the next best alternative use of the land — at Sydney Airport is higher than at the other airports. (2011, p. xii)

The evidence suggests that at-terminal car parking prices at the monitored airports reflect the opportunity cost of land close to terminals.

Scarcity rents arising from congestion

Airports set higher prices for at-terminal parking than for at-distance parking to discourage long-term car park users from taking up spaces designated for short-term users (table 6.3). Doing so improves the availability and ease of finding a space in at-terminal (short-term) parking facilities. Similarly, airports charge higher rates for parking long term in areas intended for use by meeters and greeters. For example, the price of parking for one day in the Melbourne Airport 10 minute free pickup area is \$78, compared with \$51 for the adjacent at-terminal car park (Melbourne Airport 2018b, 2019a).

Using price is an efficient mechanism to manage demand for car parking (ACCC 2011). The alternative — a lower price for in-demand parking spaces — would result in queuing and more congestion.

... what we [Melbourne Airport] have to balance is occupancy and congestion ... if you had a price that was too competitive then you could imagine a world where you've got a queue of congestion and not enough car park bays to offer to that convenience traveller. The real challenge for us is to make sure that when you're a drive up customer and you want to go to that convenience car park, there is an expectation that you have occupancy there for that customer driving up. (Melbourne Airport, trans., p. 364)

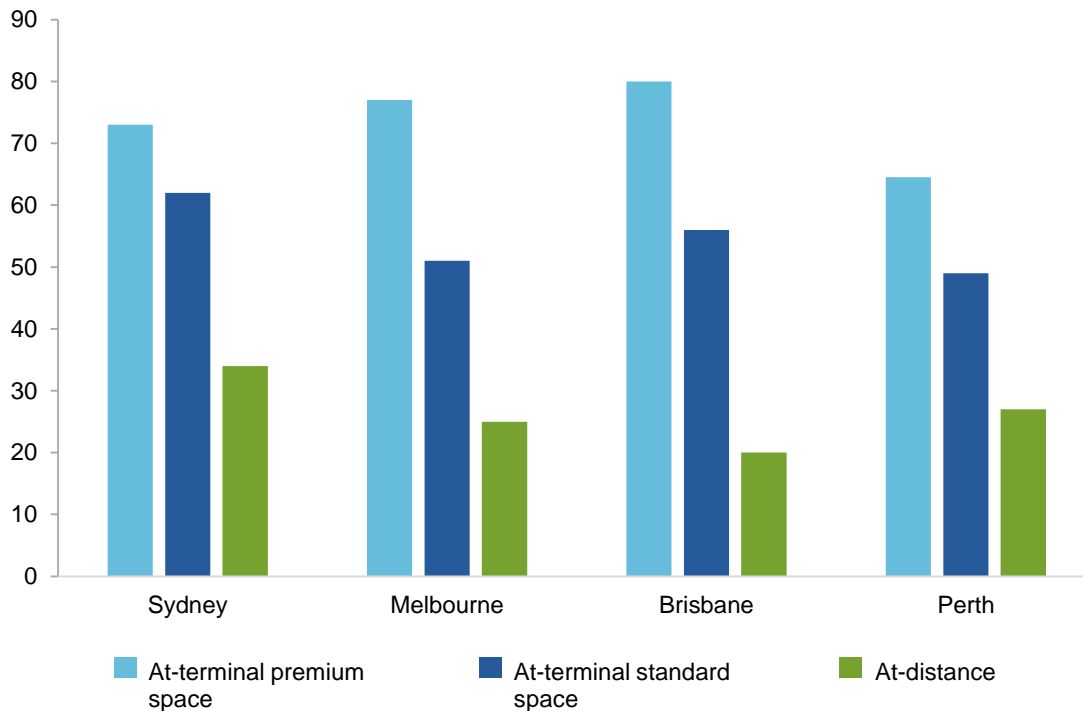
Perth Airport stated that congestion management is one reason for higher short-term prices (sub. 51). Airports also use car parking prices to reduce congestion in landside areas, such

as kerbside pick up and drop off (L.E.K. Consulting 2018). The evidence suggests that at-terminal car park prices include some efficient scarcity rents.

Locational rents arising from the value of proximity to terminals

The price of parking is higher for spaces that are closer to the terminal (figure 6.2). Across the monitored airports, the price of at-terminal parking is, on average, double the price of at-distance parking. There is also a premium for parking closer to the terminal within at-terminal car park facilities. On average, it costs 35 per cent more to park in a premium space (1-2 minutes walk to terminals) compared with a standard space (3-5 minutes walk).

Figure 6.2 Price of parking for 24 hours at the monitored airports^a
2019 drive up prices in dollars, by distance to the terminal



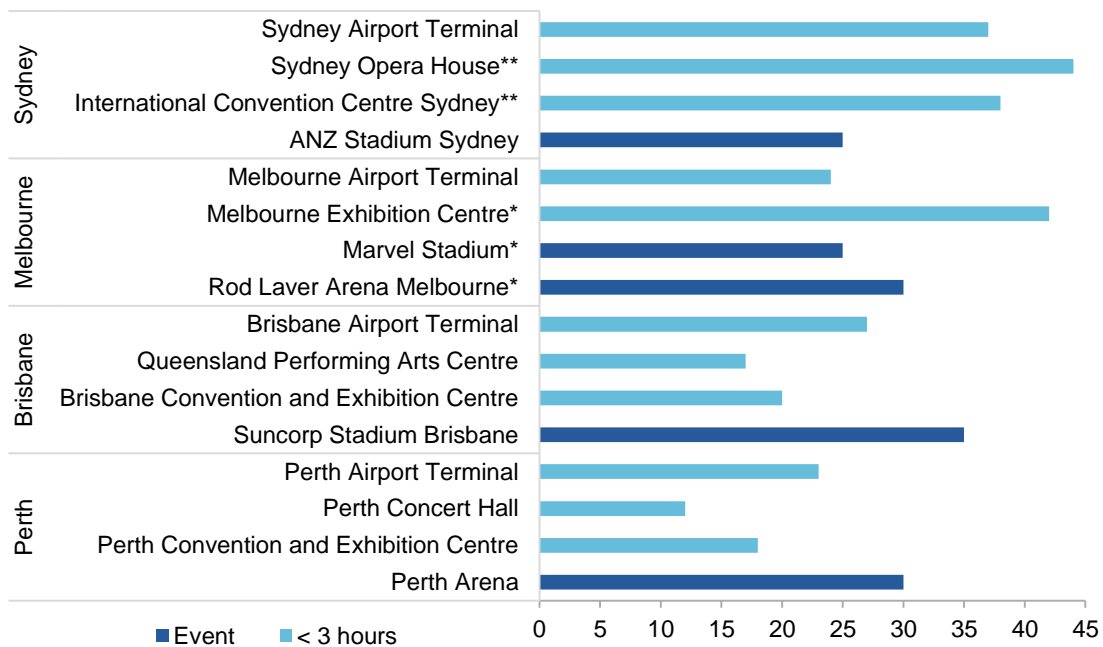
^a Prices reflect drive-up rates, except for Sydney at-terminal premium parking which can only be booked online. Standard spaces reflect self-park spaces approximately 5 minutes walk from terminals, premium spaces are also self-park, 1-2 minutes walk from terminals. At-distance car parking generally requires users to catch a shuttle bus between the car park and the terminals.

Sources: Brisbane Airport (2019b); Melbourne Airport (2019a); Perth Airport (2019); Sydney Airport (2019c).

This result holds for off-airport car parks as well. For example, off-airport car park operators located 3 to 5 km from the Melbourne Airport terminal charge, on average, approximately \$24 for one day for outdoor parking and \$77 for seven days. Operators located 5 to 7 km away charge (for the same type of facilities), on average, approximately \$19 and \$71 for one and seven days, respectively.

The value people place on convenience is evident in the cost of car parking at other venues, such as entertainment and sporting venues (figure 6.3). For example, the price of parking during an entertainment or sporting event in some cities is comparable to parking at the airport for an equivalent time. Parking at Rod Laver Arena during an event (duration of a few hours) costs \$30, compared to \$24 for three hours at the Melbourne Airport at-terminal car park. Similarly, event car parking at Perth Arena costs \$30, compared to \$23 for three hours at Perth Airport's at-terminal car park.

Figure 6.3 Car park prices at monitored airports and entertainment and sporting venues^{a,b}
2019 prices, in dollars



^a State government annual congestion levies apply to car parks in some metro areas of Sydney and Melbourne. ^b Car park prices at some event venues are dynamic. ** Congestion levy of \$2400 per car park space per year. * Congestion levy of \$1400 per car park space per year.

Sources: Brisbane Airport (2019b); BCEC (2019); City of Perth (2019b, 2019a); ICC Sydney (2019); Marvel Stadium (2019); Melbourne Airport (2019a); Metro Parking (2018); Perth Airport (2019); QPAC (2019); RAC Arena (2019); Rod Laver Arena (2019); Secure Parking (2019); Sydney Airport (2019a); Sydney Olympic Park (2019); Wilson Parking (2019).

The price differences between at-terminal and at-distance car parks are likely to reflect the different service quality provided at each type of facility, locational rents and strategies to manage congestion.

Investment in car park facilities

An airport operator that is exercising its market power in on-airport car parking could choose to underinvest in car parking infrastructure, intentionally restricting the supply of car parking to obtain scarcity rents, leading to lower quality services. Utilisation rates of car parks could also indicate if airports have provided too few car park spaces.

Supply of car park spaces

In the long run, monopoly rents can be disguised to look like congestion or locational rents if airports restrict the supply of car parks close to the terminal. Examining the supply of car park spaces over time does not suggest that the operators of the monitored airports have deliberately restricted the supply of on-airport car parking.

The number of public car parking spaces available in at-terminal and at-distance car parks increased substantially between 2010-11 and 2017-18 (table 6.5). The largest percentage increase over this period was at Brisbane and Sydney airports.

Table 6.5 Availability and use of on-airport car parking^a
2010-11 to 2017-18

	<i>Car park spaces</i>		<i>Change in supply</i>	<i>Change in the number of cars using the car park</i>
	<i>2010-11</i>	<i>2017-18</i>		
	number	Number	%	%
Sydney				
Total	9 857	18 898	92	17
<i>At-terminal</i>	5 550	12 676	128	19
<i>At-distance</i>	4 307	6 222	44	-16
Melbourne				
Total	20 029	23 725	18	-3
<i>At-terminal</i>	7 529	9 935	32	-9
<i>At-distance</i>	12 500	13 790	10	27
Brisbane				
Total	7 283	13 360	83	24
<i>At-terminal</i>	7 283	10 860	49	22
<i>At-distance</i>	..	2 500	14 ^b	212 ^b
Perth				
Total	13 256	21 588	63	-11
<i>At-terminal</i>	2 382	3 425	44	-13
<i>At-distance</i>	10 874	18 163	67	4

^a Excludes staff parking. ^b Change relative to 2015-16. .. Not applicable.

Sources: ACCC (2019) and Commission estimates.

The ACCC found that the growth in the number of car parking spaces at Brisbane and Perth airports has exceeded growth in passenger numbers, while growth in parking capacity at Melbourne and Sydney airports has been in line with growth in passenger numbers (ACCC 2018).

Although airports have provided more car parking spaces to accommodate higher passenger numbers, the demand for parking — measured by ‘throughput’, the number of cars entering and exiting the car park — at some airports has declined. At Melbourne and Perth airports throughput for at-terminal car parking declined by 9 and 13 per cent, respectively, while at Sydney Airport throughput for at-distance car parking declined by 16 per cent between 2010-11 and 2017-18 (table 6.5). Changes in throughput could reflect changes in user behaviour and other factors that affect demand for airport car parking, including the price. For example, throughput at Perth Airport’s domestic terminal car parks fell after the resource sector boom (ACCC 2018). Likewise, the decline in throughput at Melbourne Airport’s at-terminal car parks could be attributable to more users choosing free waiting and drop-off and pick-up zones, or opting for alternative transport (ACCC 2019).

Utilisation of on-airport car parks

Congestion and underutilisation (as a result of setting prices above efficient prices) could both indicate that an airport is exercising its market power in on-airport car parking. The Commission has not sought to identify an optimal level of utilisation for airport car parks as a benchmark because the level of utilisation can depend on where an airport is in its investment cycle and also on exogenous factors that influence demand for air travel. Nevertheless, comparisons between airports can be informative.

Airport operators argued that the capacity of car park facilities must significantly exceed the average utilisation rate to accommodate demand during busy times of the year, such as school holidays (Brisbane Airport, sub. 38; Melbourne Airport, sub. 33; Perth Airport, sub. 51; Sydney Airport, sub. 53). For example, Sydney Airport stated:

Maintaining sufficient capacity to meet consumer expectations at the busiest times of the year imposes a high opportunity cost of intermittent usage, since average utilisation must be well below peak demand to accommodate this level of service availability. (sub. 53, appendix 9, p. 5)

The Commission stated in the draft report that overall, utilisation data do not indicate that monitored airports have provided too few car park spaces. However, it noted that there was evidence that could be consistent with underutilisation of some at-terminal car parks at Brisbane and Perth airports. The Commission stated that it would require time series data on utilisation rates of at-terminal domestic car parks at these airports to rule out the exercise of market power in car parking.

Both Brisbane and Perth airports provided car parking utilisation data to the Commission after the draft report was released, and argued that average utilisation rates are not the appropriate measure to determine whether airports have exercised market power. Brisbane Airport stated that the ‘average utilisation rates do not reflect the use of the car park in the

peak periods and that infrastructure is not built for average demand’ (sub. DR109, p. 14). This is because average utilisation rates include usage in the middle of the night when the car parks are generally empty. Brisbane Airport argued that the peak utilisation rate (use of the car park at its peak) was a more appropriate measure.

Utilisation data provided to the Commission showed that peak utilisation rates for Brisbane Airport’s domestic short-term car park were between 65 and 80 per cent between 2013 and 2018 (Brisbane Airport, sub. DR109, pp. 13–14). Perth Airport stated that, between 2015-16 and 2017-18, peak utilisation rates for the Terminal 1 and Terminal 3/Terminal 4 car parks were between 74 and 105 per cent (Perth Airport, sub. DR114, pp. 9–10; pers. comm., 23 April 2019). The airport stated that the 105 per cent utilisation rate in the Terminal 3/Terminal 4 car park was due to seasonal peaks such as, school holidays. During these times, the airport allocates additional resources to assist customers with finding car parking.

The Commission is satisfied that utilisation rates for at-terminal car parks at Brisbane and Perth Airports do not imply the exercise of market power.

Reported quality of service for car parking

The monitored airports have made investments with the aim of improving the quality of their car park services (ACCC 2013a, 2015, 2018). Measured quality of service for car park facilities — availability and standard of car parking facilities, and time taken to enter — has remained relatively constant since 2011, with most airport car parking facilities rated either ‘good’ or ‘excellent’ in 2018 (ACCC 2019).

Prices at airport car parks are consistent with costs and the need to manage congestion

Some car parking prices at the monitored airports fell over the period 2010-11 to 2017-18, while others increased. The Commission examined the factors that influence airport car parking prices and considers (based on the available evidence) that car parking prices at the monitored airports are consistent with the fixed and variable costs of providing car parking services (including the opportunity cost of land), the need to manage congestion at highly sought after parking facilities, and the value users place on the convenience of parking within a short walk to the terminal. All of the monitored airports have increased the supply of car parking while continuing to provide acceptable quality of service according to users — airport operators have not sought to restrict the supply of car parking so they can inflate their prices.

Airport users have more choice than they had when the Commission investigated airport car parking in 2011. For example, airport operators have expanded the options available to passengers, including free waiting areas for meters and greeters. Technological change, such as wider adoption of smartphones, has also benefited users, who can now easily compare the prices of parking options and can obtain discounts for booking online. Smartphone access to

airline arrival information has also made free waiting areas and kerbside pickups more practical as substitutes for using at-terminal car parks.

The contribution of car parking revenue to airports' profits attracts considerable public attention (A4ANZ, sub. 44, sub. DR106; Hatch 2019). However, regulatory intervention to lower car parking prices would have costs, particularly for at-terminal car park users, and could lead to increased congestion. Some people would benefit from lower prices but others would not be able to access car parks at all, even if they were willing to pay more than the current prices. Regulation of car parking prices could also reduce investment by airport operators, unless the supply of car parking is also regulated. Regulating the price and supply of car parking would be complex and prone to regulatory error because of the multitude of car parking options each airport operator provides, and the changing demands of consumers.

The Commission considers that effective competition from off-airport car parks and alternative modes of transport are the best constraints on the exercise of market power at on-airport car parking. Competition, however, requires landside operators to have access to the terminal precinct on reasonable terms (discussed below). Nonetheless, monitoring of car parking at Sydney, Melbourne, Brisbane and Perth airports is still warranted (chapter 9). Ongoing scrutiny is an important check on the ability of airports to limit competition from other modes of transport and other providers of car parking services.

6.3 Landside access

Airport operators have market power in landside access because of their monopoly control over access to airport terminals. People who need access to airport terminals for their commercial operations or to travel have no substitute for the roads and forecourt areas that are controlled by airports. An airport operator could exercise its market power to reduce the competition the airport faces from off-airport car parks, public transport services, taxis and rideshare. Access to airport terminals on reasonable terms benefits the community because it facilitates competition between different modes of ground transport.

ACCC monitoring of landside access

The ACCC monitors aspects of landside access at the monitored airports. It collects less information on landside access than on car parking. The ACCC has not collected information on charges and other terms of access consistently over time, and does not collect data on the number of passengers using landside services or on operating costs.

Some elements of monitoring are carried out under Ministerial direction, including:

- the number of parking spaces available to landside operators and to the public for kerbside pick-up and drop off
- the quality of landside facilities, congestion and taxi waiting times.

At its discretion, and with voluntary cooperation from airport operators, the ACCC began collecting financial information relating to landside access in 2009-10, including revenue and access charges for selected landside services (ACCC 2011). The ACCC also started collecting survey information in 2013-14 to gauge the views of landside operators on the quality of landside access services (ACCC 2015). The ACCC discontinued the survey in 2016-17, citing low response rates from landside operators as the reason (ACCC 2018).

Are airport operators exercising market power in landside access?

An airport operator that is exercising its market power in landside access could:

- set access charges above an efficient level
- impose unreasonable terms of access for landside operators
- underinvest in infrastructure and operational aspects of landside services, leading to lower quality of service
- demonstrate a lack of good faith in commercial negotiations through, for example, take-it-or-leave-it offers to landside operators and lack of engagement and consultation.

The Commission examined the available evidence on landside access charges and other terms of access, service quality, investment in landside access infrastructure, and airport operators' negotiating behaviour.

Landside access charges and other terms of access

Airport operators set different charges and other terms of access for the range of ground transport operators that access airport terminals. In 2011, the Commission recommended that Sydney, Melbourne, Brisbane and Perth airports publish information about terms of access for ground transport operators on their websites (PC 2012a). This recommendation was accepted by the Australian Government and the monitored airports now publish information on landside access terms on their websites (Australian Government 2012).

The monitored airports argued that pricing for landside access services reflects the capital and operating costs of providing the infrastructure, the opportunity cost of land and incentives for efficient use of forecourt areas (Brisbane Airport, sub. 38; Melbourne Airport, sub. 33; Perth Airport, sub. 51; Sydney Airport, sub. 53). Some landside operators disagreed and submitted that access charges are excessive (examples are discussed below).

As with car parking, the Commission's preferred approach to assessing whether these charges are consistent with efficient pricing is to compare the charges to the long-run average cost of providing landside access services. However, this was not possible for landside access — the Commission does not have access to consistent information on landside access charges over time, or on the capital and operating costs of providing landside access services. Instead, the Commission examined the available quantitative and qualitative evidence on

landside access charges, including that provided in submissions and consultations, to inform its assessment and recommendations.

Changes in landside access charges and other terms of access over time could reflect a number of factors including changes in: passenger preferences and hence demand for some services over others; investment into operator-specific and common-use infrastructure; operating costs; the need to manage congestion; and changes in the methodology used to determine charges for accessing landside services.

Taxi and rideshare services

Airports provide holding and waiting areas for on-demand taxis (not pre-booked) and rideshare services. They charge a flat fee to those operators to cover the cost of providing holding facilities, operating costs (such as traffic management services), and space at kerbside. There is no charge for drop off for taxi and rideshare services. Airport operators have increased access charges for on-demand taxis since 2011 (table 6.6). The monitored airports have recently introduced access charges for ridesharing services.

Pre-booked taxis at the monitored airports face a different fee structure and have separate pick-up and drop-off areas to on-demand taxis. Airport operators charge a flat fee and a congestion charge to discourage drivers from waiting for extended periods in forecourt areas. The Commission does not have comparable information on charges for pre-booked taxis over time.

Table 6.6 Access charges for taxis and ridesharing services
Prices in 2017-18 dollars

	<i>Taxi</i>								<i>Rideshare</i>
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2017-18
Sydney	3.45	3.93	3.84	4.01	4.20	4.25	4.33	4.50	4.00
Melbourne	1.52	1.48	1.45	2.89	2.84	2.80	3.65	3.58	4.40
Brisbane	3.45	3.37	3.62	3.53	3.57	3.63	3.67	3.70	3.50
Perth	2.30	2.25	2.20	2.14	2.10	3.11	3.06	3.00	3.00

Source: Commission estimates based on ACCC (2019).

Chauffeured services

The monitored airports charge chauffeured car services a two-tiered charge with a similar structure to pre-booked taxis — a flat fee and congestion charges. Barton submitted evidence on the magnitude of the charges.

... hire car operators and pre-booked taxis are forced to pay anywhere from \$3 (up to 5 minutes) to \$24 (for 60 to 180 minutes, beyond this drive up rates apply), charged incrementally, to park in dedicated VHA [hire car] parking bays further from the terminal. (sub. 133, p. 1)

Operators of chauffeured services raised concerns about landside access at some airports. The Commercial Passenger Vehicle Association of Australia argued that Melbourne Airport creates commercial advantages for some car hire services by providing them with waiting facilities (sub. 141).

Setting different charges or providing different facilities is not an exercise of market power. Chauffeured service operators can avoid a significant proportion of the congestion charges by planning their arrival times — unlike on-demand taxis, chauffeur car operators go to the airport to collect a specific passenger. Chauffeured car services serve a small proportion of airport passengers, and are a premium transport option. The Commission does not consider that the structure or level of these charges is causing a material loss of efficiency.

Private buses

Sydney, Melbourne and Brisbane airports all have different pricing structures and other terms of access for private buses, including those run by hotels, off-airport car rental and off-airport car park operators. Bus operators pay an access fee based on the size of the vehicle, and a congestion charge if they stay longer than a specified time (generally set at 10 minutes). Melbourne Airport stated that congestion charging was introduced following a review of efficiency of bus operations undertaken in 2012 in consultation with bus operators, and that it has been effective in reducing the time operators spend waiting in the forecourt (sub. DR107).

Charges and other terms of access for private buses at Sydney, Melbourne and Brisbane airports have changed over time (Andrew's Airport Parking Group, sub. 30; Brisbane Airport, sub. 38, appendix B; Melbourne Airport, sub. 33, attachment; Sydney Airport, sub. 53, appendix 9).

A number of off-airport car park operators at Melbourne and Brisbane airports submitted that charges for private shuttle buses have increased over time without improvements in infrastructure and services provided (Jetport Airport Parking, sub. DR165; Ryan, sub. DR138). Andrew's Airport Parking Group stated:

... despite significant increases in access fees [since 2014] and resultant revenue, infrastructure and services specific to off-airport parking remain largely unchanged over the same period at both [Melbourne and Brisbane] airports. (sub. DR152, p. 2)

Brisbane Airport argued that the changes in access fees for off-airport car park operators reflect improvements in infrastructure and quality of service and the shift away from a legacy agreement that had been based on a monthly fee, rather than per-pickup charge (sub. DR109). The airport also stated that infrastructure improvements were not specific to off-airport car park operators but had benefited landside operators, including off-airport car parks, through reductions in congestion.

Melbourne Airport argued that prior to 2014 it did not recover the capital costs of ground access facilities through landside access charges (sub. DR107). Recovering capital costs is not evidence of the exercise of market power.

Increasing charges to recover capital and operating costs is consistent with efficient pricing, as is increasing charges to manage congestion. The Commission has a limited evidence base to draw on to determine whether the charges and other conditions for private bus access are reasonable. The increasing number of off-airport car parks since airports were privatised is a positive sign that charges and access conditions have not prevented increasing competition for airport car parks.

Public transport

Most public transport services do not incur landside access fees at the monitored airports. Sydney Airport does not collect any revenue for use of the train service. Brisbane Airport, charges the train operator (Airtrain) an annual corridor charge.

Public buses, such as the 901 route that services Melbourne Airport, are exempt from access charges at the monitored airports. There are no public bus services to Brisbane Airport terminals. Public bus access to terminals at Brisbane Airport is prohibited under the contract between the company that operates the train service (Airtrain) and the Queensland Government (chapter 10). This is a barrier to competition that works against consumer interests.

On-airport car rental operators

Airport operators negotiate individually (and confidentially) with car rental operators on terms of access to services on airport land. Access charges generally cover terminal space for customer service desks, allocated car parking in at-terminal car parks, and facilities for maintaining and cleaning vehicles (AFIA, sub. 67). On-airport car rental operators also pay a concession fee, which is charged as a percentage of revenue earned, and are subject to minimum annual concession payment guarantees.

Car rental operators and Airlines for Australia and New Zealand argued that Australian monitored (and some non-monitored) airports are among the most expensive in the world for car rental operators. The Australian Finance Industry Association (AFIA) representing car rental operators, commissioned Frontier Economics to examine the charges car rental operators incur at Australian and overseas airports, and at non-airport locations in Australia. Overall, Frontier Economics found that car rental operators at Australian airports face higher charges per transaction, relative to non-airport locations in Australia and many overseas airports (box 6.1). In the Commission's view, the Frontier Economics analysis is not an 'apples-with-apples' comparison and does not provide sufficient evidence that Australian airports have exercised their market power. The full report was provided to the Commission in confidence so is not open to public scrutiny.

Car rental operators argued that concession fees charged by airports are ‘extractive’ and that minimum annual revenue guarantees have grown over time (AFIA, sub. 67, p. 17). Concession fees are a common component of other non-aeronautical contracts, including retail space in Australia and globally, and have been in place between airports and car rental operators since the mid-1980s (BTCE 1988). The existence of concession fees is not, of itself, evidence of exercise of market power — they can be part of an efficient pricing structure.

Box 6.1 Frontier Economics’ analysis of car rental charges at airports

Frontier Economics examined charges car rental operators incur at Australian airports and city locations, and of a selection of overseas airports (sub. 67). Overall, Frontier found that car rental operators at some airports in Australia face high charges per transaction, relative to many overseas airports. For example, nine Australian airports (monitored and non-monitored) were included in the list of top 10 airports ranked by highest charges per transaction.

Frontier Economics also found that within Australia, charges per transaction at airport locations are three to five times higher compared to non-airport locations, such as city centres. For example, the charge per transaction at Sydney Airport was \$92, while at a Sydney down town location the charge was \$26. Frontier noted, however, that charges for car rental operators in non-airport locations include the cost of land and facilities only, and do not include concession payments.

The Commission considers that the comparisons between Australian and overseas airports, and Australian non-airport locations do not tell the full story. Some important details not adequately accounted for in the confidential report include:

- airports and non-airport locations provide different facilities to car rental operators. This can significantly influence the cost of providing facilities to car rental operators
- concession payments vary by airport and operator, and are not levied at non-airport locations, which significantly influences the charges car rental operators incur.

It is also not clear how Frontier Economics has addressed the need to adjust values to reflect exchange rate issues when comparing charges across countries.

The Frontier Economics report does not provide sufficient evidence to conclude that the operators of the monitored airports have exercised their market power over car rental operators.

Frontier Economics analysis showed that concession payments make up over 50 per cent of the charge per transaction for car rental operators at most airport locations (sub. 67, p. 16). These payments could explain the observed variation in charges between airport and non-airport locations — as concession payments are not charged at non-airport locations. The difference in charges between airport and non-airport locations could also reflect locational rents and opportunity cost of land, or the exercise of market power.

The Frontier Economics analysis does, however, highlight the risks and difficulties of using a single metric — airport charges — to determine whether an airport has exercised its market power. Cognisant of these risks, the Commission has not sought to conclusively determine whether the monitored airports are exercising their market power against car rental operators, given the limitations of the available data. The Commission’s recommendations to enhance

the monitoring regime are aimed at improving the availability of data to enable greater scrutiny of the airports' performance in the future (chapter 9).

Investment in landside infrastructure

Airports exercising their market power would be expected to underinvest in infrastructure and operational aspects of landside services, leading to a lower quality of service.

Infrastructure investment — existing and new ground transport services

Airport operators have invested in improvements to landside services since the last Commission inquiry into airport regulation in 2011, including road-widening, waiting facilities for operators, separate lanes for taxis and buses, pick-up areas and shelters. Some airports have introduced (or are introducing) new technologies to improve the quality of landside access, including electronic access fee collection and traffic management systems.

There have also been changes to landside infrastructure to enable the use of ridesharing services. Facilities include designated pick-up and drop-off areas, holding areas for drivers, waiting areas for rideshare customers and signage to assist passengers in navigating through the airport to access ridesharing services (ACCC 2018). Car share services are also available at Sydney, Melbourne and Brisbane airports.

Some monitored airports are investing, or have plans to invest, in facilities to support proposed public transport services to and from airports. A train line that connects Perth Airport to the surrounding suburbs is under construction, and is expected to open in 2021 (Western Australian Government 2018). Perth Airport stated that it provided land for the Airport Central Station and will contribute to the cost of the elevated walkway connecting Terminal 1 forecourt to the station (sub. 51). Likewise, the Victorian and Australian Governments have announced that a train service to Melbourne Airport will be built, with construction planned to start by the end of 2022 (Victoria's Big Build 2018). Melbourne Airport stated that over the next 10 years it will develop a train station within the main terminal precinct to enable efficient passenger access to and from terminals (sub. 33). These investments will expand users' options for ground access to and from airports, and will help constrain airports' market power in on-airport car parking.

Not all landside operators were satisfied with airports' investments in landside infrastructure. AFIA stated '... we receive no benefit of investment back into car rental facilities from any increase in fees paid' (sub. 67, p. 12). Airport operators have stated that they have undertaken investments to improve facilities for car rental operators (Brisbane Airport, sub. 38, appendix B, p. 20; Melbourne Airport, sub. 33, pp. 82–83). Melbourne Airport stated that improvements to car rental operators have included delivery of quick turnaround bays, lighting improvements, installation of security measures and a dedicated entry and exit to the car park (sub. DR107).

In the landside operator survey conducted by the ACCC between 2015 and 2017, off-airport car park operators also raised concerns about some airports' investments in landside access (ACCC 2015, 2016, 2017a).

Evidence on the reported quality of landside access (discussed below) suggests that investment has been adequate to keep up with demand. As with aeronautical infrastructure, the Commission considers that airport operators have little incentive to overinvest and the available evidence shows that airports' investment in landside infrastructure has been reasonable.

Reported quality of service

Since 2011, passengers have reported that the quality of landside access at the monitored airports — kerbside pick-up and drop-off facilities, waiting time for taxis, and kerbside congestion — has improved. Of the monitored airports, more were rated as 'good' or 'excellent' in 2017-18 than in 2010-11, across the various aspects of quality of landside access (ACCC 2012, 2019). Kerbside congestion at Sydney Airport, however, has consistently been rated 'satisfactory'. Sydney Airport stated that ground access challenges have become 'more acute' because of 'a greater number of people travelling to and past the airport each day' (sub. 53, p. 115). The airport also stated that it has encouraged airport users to travel to the airport by train and has supported proposed upgrades to the airport train link to cope with increased customer demand. Airport operators have an incentive to reduce congestion in landside areas because it could affect safety and security within the terminal precinct.

Negotiation with landside operators

A systematic or persistent lack of good faith conduct by an airport in negotiations — through for example, lack of engagement and consultation, using take-it-or-leave-it offers, or refusing to share relevant information — could indicate an exercise of market power. The Commission examined evidence on contracts and the consultation forums airport operators use to engage with ground transport operators.

Consultation with landside operators

Operators of the monitored airports have agreements in place with a large number of ground transport operators — over 3000 in the case of Sydney Airport (sub. DR112, p. 16). The monitored airport operators have forums or committees through which they meet with landside operators to discuss financial, operational and development issues (Brisbane Airport, sub. DR109; Melbourne Airport, sub. DR107; Perth Airport, sub. DR114; Sydney Airport, sub. DR112). The monitored airports stated that they consult with landside operators when undertaking investments, determining charges and other terms of access. However, it is not always possible to meet everyone's demands.

Due to the nature of facilities provided, scarcity of near terminal space and ongoing airport developments, PAPL [Perth Airport] is not always able to meet the preferences of each operator. PAPL management gives due consideration to issues tabled by operators and takes an objective

fact-based approach when determining the need for (and feasibility of) change in a balanced, considered manner cognisant of a range of often competing demands from various airport stakeholders. (Perth Airport, sub. DR114, p. 7)

The ACCC landside operator survey showed that, between 2014-15 and 2016-17, some landside operators and industry bodies, including taxis and buses, found consultation about landside access arrangements to be satisfactory at the monitored airports. For example, in relation to Brisbane Airport in 2014-15, the ACCC noted:

In terms of management responsiveness, industry groups stated that Brisbane Airport works closely with the industries and have regular meetings to address concerns and issues. (2016, p. 74)

Similarly, in relation to Sydney Airport in 2015-16, the ACCC noted:

Management responsiveness to addressing quality of service problems was rated as ‘satisfactory’ for both availability and standard. Landside users commented that management was generally approachable. During 2015-16 Sydney Airport and the New South Wales Taxi Council implemented a new working group to improve taxi services for customers. (2017a, p. 167)

Not all landside operators surveyed between 2014-15 and 2016-17 were satisfied. Off-airport car park operators expressed concerns to the ACCC about the behaviour of some airport operators in landside access (ACCC 2015, 2016, 2017a).

... off-airport parking operators commented that Brisbane Airport is unresponsive to their needs and have poor communication. (ACCC 2016, p. 74)

Off-airport parking operators commented that Melbourne Airport’s management is generally dismissive of issues raised and that negotiations have not resulted in outcomes that are acceptable to any party other than the airport. (ACCC 2016, p. 103)

Inquiry participants have voiced similar concerns (ACCC, sub. 59; Jetport Airport Parking, sub. DR165). For example, Andrew’s Airport Parking Group stated:

While APAM [Melbourne Airport] does host and document quarterly briefings to advise service providers of changes and developments at the airport, these meetings do not provide an appropriate or timely opportunity for off-airport parking operators to raise individual cases of access or parking issues. (sub. 30, p. 3)

... to comment on Brisbane Airport’s level of consultation, it is minimal. Where Melbourne has quarterly meetings that follow a structure and are documented, Brisbane have bi-annual meetings, without pre-communicated agenda or documentation (or at least minutes or similar are not circulated). We could not count the number of times that our suggestions were put “into future planning” only to disappear by the next meeting 6 months later. (sub. 30, p. 4)

In response, Melbourne Airport said it consulted widely with ‘operators through the Forecourt Bus Operators Forum, and individually with specific operators that had particular concerns’ when it was reviewing the efficiency of forecourt operations (sub. DR107, p. 16). The airport also said that the Landside Operators Committee provides an avenue for landside operators to meet and discuss issues they want to raise, but that it is not always possible to satisfy all operators with the way the meetings are run. To demonstrate how the committee operates, Melbourne Airport has provided the Commission (on an in-confidence basis) with

the minutes from meetings held. Minutes from the Brisbane Airport's Ground Transport Operators Forum are published on the airport's webpage (Brisbane Airport 2019a).

Take-it-or-leave-it offers

An airport that is exercising its market power in landside access could make take-it-or-leave-it offers to landside operators. Airports argued that the approach to determining charges and other terms of landside access can vary depending on the type of service and facilities provided. Melbourne Airport stated that where possible, it conducts bilateral negotiations to reach agreement on operators' specific needs (sub. DR107). It conducts bilateral negotiations for Skybus, taxis, rideshare services and car rental. AFIA did not agree that it is able to negotiate with airports.

They are not commercial negotiations at all. We have no leverage as the airport knows we need to be there and so there is no meaningful negotiation. There have been occasions where we have tried to negotiate on issues which we think create an unfair outcome for consumers and have literally been told that if we are still on the airport the next day that we are deemed to have accepted the concession agreement as presented. (sub. 67, p. 11)

Sydney Airport contradicted this point.

The rental car agreements are negotiated between once again, sophisticated commercial counterparties. We're talking the likes of Avis and Hertz, who are global companies. They operate in airports around the world. And we enter into negotiated agreements with them. (trans., p. 224)

Sydney Airport also stated that dispute resolution mechanisms are outlined in contracts with car rental operators (sub. DR112).

Bilateral negotiations are not always practical, particularly for services where a significant number of operators access common-user infrastructure and services. Airport operators set the terms and conditions of access with the objective of promoting the efficient and safe operation of landside access services. Airports have stated that they consult operators when setting the terms and conditions for common-user infrastructure. However, given the limited forecourt space particularly close to the terminals and the safety and efficiency objectives, it is not always possible to reach an outcome that is preferred by all parties.

At Sydney Airport, land close to the terminals is scarce, and the opportunity cost of the land use is significant. Sydney Airport must balance how it uses this scarce land to reduce congestion and keep traffic flowing while also offering consumers a range of access options. (Sydney Airport, sub. DR112, p. 10)

Brisbane Airport stated that users of common infrastructure have access to dispute resolution that entails escalation up to management, followed by escalation to the ACCC — the airport provided an example of a complaint that was escalated to the ACCC (sub. DR109). Melbourne Airport also noted, where landside operators feel that the airport is acting in an unfair manner and is in breach of the *Competition and Consumer Act 2010* (Cwlth), they can escalate matters to the ACCC (sub. DR107). The ACCC has tools to address certain behaviour of airport operators in relation to landside services. The tools include provisions

under the Competition and Consumer Act to protect small businesses from unfair contract terms and anticompetitive conduct if airport operators' behaviour leads to a substantial lessening of competition (ACCC, sub. 59).

Inquiry participants have made statements about take-it-or-leave-it offers. The unwillingness to negotiate on specific aspects of the service offer is not in itself evidence of exercise of market power. The competing demands and efficiency objectives of airports in landside access will undoubtedly lead to unfavourable outcomes for some parties.

Based on the evidence presented, the Commission considers that operators of the monitored airports have not systematically exercised market power in landside access negotiations with landside operators.

Transparency and information sharing relating to the setting of access charges

Some landside operators argued that airport operators are not transparent in the way they set landside access charges.

Since AAP [Andrew's Airport Parking] began paying access fees at Melbourne Airport in September 2004, these fees have continued to increase without any formal notification or clarification of the methodology used to calculate these increases. (Andrew's Airport Parking Group, sub. 30, p. 3)

Information exchange between airport operators and ground transport operators occurs through consultation forums. Melbourne Airport stated that the Landside Operators Committee is used to update landside operators on changes in pricing and provide explanations of modelling used to inform price changes and other terms of access (sub. DR107). Melbourne Airport has provided the Commission with minutes from a number of meetings to demonstrate the types of issues that are covered. The minutes provided include discussions relating to how landside access charges are determined.

Participants also argued that some airport operators are not transparent in how they recover costs of common-use landside areas, such as roads (BARA, sub. 42; Qantas Group, sub. 58). For example, Virgin Australia Group stated:

Virgin Australia is concerned that, due to the lack of overall transparency [in how charges are determined], airports have the ability to over-allocate or inappropriately allocate assets to the aeronautical asset base while still having regard to the cost of those assets when setting terms and conditions of landside access and other non-aeronautical facilities. This can result in "double-dipping", whereby costs may be allocated to both aeronautical and non-aeronautical services, resulting in duplication of recovery by the airport. (sub. 54, p. 21)

Similarly, Airlines for Australia and New Zealand outlined that:

In one case, a major capital city airport sought to allocate over 87% of road investment to aeronautical users. This of course does not accurately reflect the benefit that non-aeronautical users of airport facilities (e.g. car park users, industrial park tenants and retail operators) derive from those road assets. (sub. 44, p. 19)

Melbourne Airport stated that the costs recovered through landside access charges are not also recovered through aeronautical agreements (sub. DR107). The Commission received limited evidence on how airport operators allocate the cost of common-use landside infrastructure. Better monitoring of cost allocation would inform future assessments of the exercise of market power by airports (chapter 9).

Data on some aspects of landside access are inadequate

The *structure* of landside access charges appears to be consistent with efficient operations, but the Commission is unable to be definitive about the *level* of charges due to inadequate data. A number of participants argued that lack of information in relation to landside access was a limitation of the current monitoring regime (ACCC, sub. DR158; AFIA, sub. 67). Future analysis would benefit from more data on landside access, including charges and other terms of access, throughput, operating costs and revenues (chapter 9).

Airports have supported the introduction of new ground transport services (such as rideshare and car share services) and provided facilities to enable the operation of these services. Reported quality of service has also been within a reasonable range at the monitored airports (although there is scope for improvement at Sydney Airport) and has not deteriorated despite increases in the demand for kerbside space over time.

Airport operators have argued (supported by evidence) that they consult with operators when undertaking infrastructure investments and setting terms of access for landside areas. The Commission is mindful that ground transport operators have less bargaining power than airlines — they have no ability to switch to an alternative provider. This means that airport operators can make take-it-or-leave-it offers, but this is not necessarily reflective of exercise of market power. Bilateral negotiations are not always practical, particularly for services where a significant number of operators access common-user infrastructure and services. It is also not always possible to reach an outcome that is preferred by all parties given limited forecourt space, particularly close to the terminals, and the safety and efficiency objectives of airport operators.

6.4 Effectiveness of the monitoring regime

Car parking

The data currently collected for the monitoring regime can reveal changes over time in profit margins, operating costs, revenue and profit per vehicle, and the quality and supply of car parking. The indicators collected are useful in understanding where car parking is becoming more expensive, profit margins are increasing or decreasing, and if airports are investing in car park facilities. However, these indicators *alone* cannot determine whether airports are exercising their market power in car parking. The ACCC acknowledged limitations of the information collected.

Car parking information collected for the ACCC monitoring report is less detailed than what is collected for aeronautical services. For example, asset values are not provided for car parking services, although it is noted that there are challenges with providing information at this level of detail. Furthermore, monitoring does not provide conclusive evidence about whether airports are earning monopoly rents. (sub. 59, p. 50)

The Commission agrees that the data collected for car parking could be more detailed and has proposed reforms to the monitoring regime to address this shortcoming in chapter 9.

Landside access

Airport operators voluntarily provide financial data relating to landside access services to the ACCC, but the data are not adequate to determine whether charges exceed efficient levels or to reveal details about other terms of access that might inhibit competition. Currently, revenues are reported for selected landside services only, without any reference to operating or capital costs. Quality of service measures collected through the passenger survey are helpful in understanding whether airports are maintaining the quality of landside access but alone are not adequate to identify exercise of market power. The ACCC has acknowledged the limitations of the landside access data collected.

As part of the monitoring program, the ACCC also requests information on costs and assets for landside access. However, responses to these requests have varied. For instance, some airports advised that it is difficult to allocate for various landside access services. Some airports also stated that charges reflect the value of the location and service provided. A lack of cost information limits the ACCC's ability to draw meaningful conclusions about the level of prices and revenues generated from landside access activity and its likely effect on an airport's performance. (2012, p. 47)

The Commission agrees with the ACCC's conclusions about the limitations of the monitoring regime as it relates to landside access.

The Productivity Commission recommended in its 2011 inquiry into the *Economic Regulation of Airport Services* that the monitored airports provide information relating to price and other terms of access for transport operators to the ACCC (PC 2012a). The Australian Government stated in its response to that inquiry that it agreed with the recommendation in principle, but it did not make legislative changes to require the monitored airports to provide this information to the ACCC. The Australian Government stated:

... under the CCA [Competition and Consumer Act], the ACCC is only required to monitor the prices, costs and profits relating to the supply of car parking by a specified person. As an independent statutory authority, any decision to monitor other aspects, such as ground transport access charges and associated revenues, is a matter for the ACCC. (2012, p. 6)

The Commission remains of the view that airports should be *required* to provide information on prices and other terms of access for landside services (chapter 9).

7 Access arrangements at Sydney Airport

Key points

- Sydney Airport's regional ring fence, and the price cap and price notification regime, aim to support access for airlines operating flights between Sydney Airport and regional New South Wales. Sydney Airport is also subject to broader regulatory constraints, in particular, the movement cap, curfew and slot management scheme.
- Regional access objectives are important — they should be achieved in the most efficient and effective way, and be balanced against community-wide costs. The current arrangements facilitate access for airlines operating regional flights into Sydney Airport but should be improved.
- Aircraft movement slots that are not within the regional ring fence cannot be used by airlines for regional air transport in peak periods, even if this would generate greater benefits to the community. Airlines should be able to use any peak-period slot for flights servicing regional New South Wales. This would enable airlines to test and grow regional routes and use their aircraft more efficiently.
- The price cap is only one factor in an airline's decision to service a route. The benefits of the price cap appear to be limited to marginally profitable routes and the costs are uncertain. The price cap should be retained at this time.
- The public nature of price notifications could discourage commercially negotiated outcomes between Sydney Airport and airlines operating regional flights, if it led to them being unwilling to release sensitive information that would otherwise be contained in agreements. The price cap and notification regime should only apply to prices for regional aeronautical services that are not covered in commercial agreements.
- Sydney Airport's movement cap and curfew are important for managing the effects of aircraft noise and maintaining Sydney's liveability. However, there is room to improve the way these regimes are implemented.
 - Measuring the number of actual aircraft movements once (rather than four times) an hour would help to achieve the intended 80 movements an hour, and benefit airlines and their passengers.
 - Alternative types of freight aircraft should be allowed to operate during the curfew, provided aircraft noise and the number of movements are not increased above current levels.
- The current cap of 80 aircraft movements an hour outside of curfew hours and the cap of 74 freight aircraft movements a week during the curfew should be retained.
- Sydney Airport's slot management scheme can restrict competition between airlines, which could affect airfares and the airport's operational efficiency, to the detriment of passengers and the broader community. The Australian Government should commission a public review of the scheme. The review should also consider the need to implement or revise slot management at other major Australian airports.

Sydney Airport is an important air transport hub and its passenger numbers are higher than any other Australian airport. The Australian Government facilitates access into Sydney for airlines servicing regional communities through policies including a regional ring fence, and a price cap and price notification regime. Sydney Airport is also subject to broader regulatory constraints, in particular, a movement cap, curfew and slot management scheme.

The Australian Government asked the Commission to review the regional price cap and price notification regime. The Commission also examined the regional ring fence and other regulatory constraints to provide a broad review of access arrangements at Sydney Airport.

7.1 Regional access to Sydney Airport

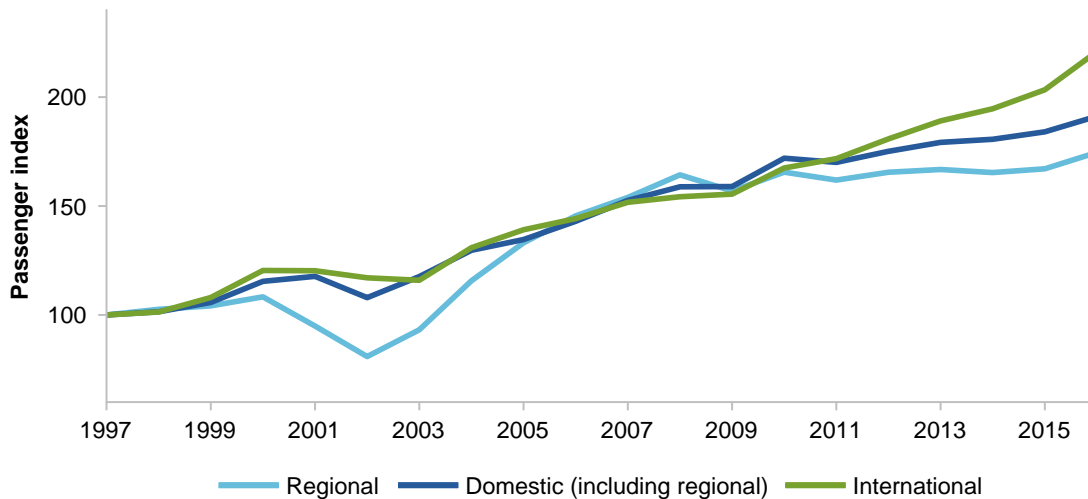
Most regional flights in Australia connect regional communities to state capital hubs (Mills 2017). They provide regional communities with access to emergency and essential services, and promote connectivity and development through greater social cohesion, access to markets and tourism (Deloitte Access Economics 2018; Donehue and Baker 2012). Sydney Airport is a vital hub for passengers in NSW regions, many of whom go on to use other domestic or international air transport services (Sydney Airport, sub. 53).

Regional air transport typically consists of short-haul routes with low passenger numbers (Mills 2017). These routes are often serviced by a single airline with relatively small aircraft running a small number of flights. Regional Express (Rex) is Australia's largest dedicated regional airline and operates 34-seat turboprop aircraft (Rex, sub. 63, p. 4). Qantas Group and Virgin Australia Group also have regional brands — QantasLink and Virgin Australia Regional Airlines — that operate turboprop aircraft with 68–74 seats and jet airliners with 100–125 seats (Qantas Group 2018, pp. 47–50; Virgin 2016). Some smaller regional airlines, such as Fly Corporate and FlyPelican, operate 19-seat turboprop aircraft (Fly Corporate 2019; FlyPelican 2019).

Over 60 per cent of routes between Sydney and NSW regions had only one airline group servicing them in 2016 (Commission estimates based on NSW BTS (2018) and BITRE (unpublished)). Routes that were serviced by more than one airline group tend to have larger passenger numbers, such as those connecting Sydney to Albury, Ballina and Dubbo.

The number of passengers travelling between Sydney and NSW regions grew by 75 per cent, from 1.3 to 2.2 million, between 1997 and 2016. This remains small relative to the number of interstate and international passengers at Sydney Airport (figure 7.1). Domestic passenger numbers (including regional) reached 26.9 million and international passenger numbers reached 15.1 million in 2016 (growth of 91 and 121 per cent, respectively since 1997). Growth in passenger numbers is expected to continue, with forecasts of 34.1 million domestic (including regional) and 31.5 million international passengers in 2039 (Sydney Airport 2019b, p. 52).

Figure 7.1 **Index of passenger numbers at Sydney Airport**
1997 to 2016, base year = 1997



Sources: Commission estimates based on BITRE (2017a) and NSW BTS (2018).

Governments support the objective of regional access

Without government intervention, airlines and airport operators could have a greater incentive to cater to higher volume (and potentially more profitable) interstate and international routes rather than regional routes. This is particularly the case during congested peak periods, which are becoming more acute at Sydney Airport. Accessing Sydney Airport presents challenges given its important role as a hub for domestic and international passengers, and its proximity to residential communities, which has led to strict noise management policies. The Regional Aviation Association of Australia (RAAA) stated:

The financial incentive[s] for large capacity restricted airports like Sydney to force out small airlines are huge when it is considered that a 34 seat or 19 seat aircraft occupies a slot that could be filled by a large international or domestic operator which generates far more revenue for the airport. (sub. 66, p. 23)

Australian Governments have affirmed their commitment to supporting regional communities' access to Sydney Airport. When airport price regulation shifted from price controls to price and quality monitoring in 2002, the Australian Government announced that:

... these new arrangements would not impact on regional airline operations into and out of Sydney. They will continue to be guaranteed reasonable access to Sydney airport under the slot management system and with a prohibition on any increases in aeronautical charges that exceed the Consumer Price Index. (Minister for Transport and Regional Services and Treasurer 2002)

The Australian Government stated in the terms of reference for this inquiry that it '... remains strongly committed to maintaining access for regional communities into Sydney Airport'.

Regulatory constraints affect access to Sydney Airport

Connecting regions to Sydney Airport is more challenging than at other airports due to capacity constraints arising from aircraft movement restrictions and congestion.

- Movement restrictions at Sydney Airport manage the negative effects of aircraft noise on the health and quality of life of residential communities (section 7.4; ASA and AAA nd; PC 2012a). A movement cap limits the number of hourly aircraft movements and a curfew restricts night-time movements (box 7.1 and section 7.4).
- Sydney Airport faces congestion, especially during morning and evening peak hours. A slot management scheme allocates movement slots to airlines and manages congestion (box 7.2 and section 7.5).

Box 7.1 Sydney Airport's movement cap and curfew

Aircraft movement cap

Actual aircraft movements are limited to 80 an hour during non-curfew times, as specified in the *Sydney Airport Demand Management Act 1997* (Cwlth). This limit is measured over a rolling hour every 15 minutes. Exceptions apply in emergencies, for safety or international relations reasons, or for certain aircraft used as part of defence force, military, customs or police services. Airservices Australia manages air traffic and ensures that the actual number of movements is in line with the movement cap. Breaches of the movement cap are rare, having only occurred once within the past five years (ASA 2019b; Harfield 2017).

The Sydney Airport Slot Management Scheme 2013 (Cwlth) provides a system for the allocation of slots (permissions for aircraft movements), consistent with the movement cap. Airport Coordination Australia is responsible for allocating slots for scheduled movements.

Night-time curfew

The *Sydney Airport Curfew Act 1995* (Cwlth) and Sydney Airport Curfew Regulations 1995 (Cwlth) set out the rules governing Sydney Airport's curfew. The curfew limits aircraft movements between 11 pm and 6 am, with only a small number of flights permitted:

- pre-approved international flights — up to 24 weekly landings between 5 am and 6 am (as prescribed in the Regulations), with no more than five a day
- pre-approved freight aircraft — up to 74 British Aerospace 146 (BAe-146) aircraft freight movements a week
- specific jet aircraft and propeller-driven aircraft that weigh up to 34 000 kg and comply with noise standards. Jet aircraft must be of a type specified by the Minister.

Since its assent on 22 November 1995, the Sydney Airport Curfew Act has stipulated that the latter three permissions will no longer apply after an airport at Badgerys Creek is available for night use.

Exceptions to the curfew apply in emergencies or under exceptional circumstances arising from unforeseen events, such as an aircraft mechanical failure occurring during preparation for take off, for which alternative arrangements could not be made. They do not generally include adverse weather conditions that were expected to eventuate prior to take off (DITCRD 2016b).

On average, there are 12 aircraft movements a night during curfew hours (ASA 2019c).

Box 7.2 Slot coordination

A **slot** is a permission to take off or land at an airport at a specific time on a specific day. **Slot coordination** is the process of allocating slots to airlines at congested airports, and is aimed at promoting the efficient use of airport infrastructure.

The International Air Transport Association publishes Worldwide Slot Guidelines (WSG) to provide the air transport industry with standards for slot management. Slot coordinators allocate slots to airlines twice a year, for the northern winter and northern summer scheduling seasons.

Some key features of slot coordination outlined in the WSG include:

- slots may be transferred or swapped between airlines or used as part of a shared operation
- airlines are entitled to retain slots on the basis of historical precedence if they used the slots at least 80 per cent of the time in the previous equivalent season (the ‘use it or lose it’ rule)
- following the allocation of and changes to historic slots, the remaining slots form a slot pool. Fifty per cent of the slot pool must be allocated to new entrants, if possible.

Airport Coordination Australia designates eight Australian airports — Sydney, Melbourne, Brisbane, Gold Coast, Cairns, Adelaide, Perth and Darwin — as congested airports requiring slot coordination. Slot coordination at Sydney Airport is governed by the *Sydney Airport Demand Management Act 1997* (Cwlth) and associated legislative instruments. These were developed with reference to the WSG but include deviations such as guaranteed slots for NSW regional air transport and a ‘size of aircraft’ test. Slot coordination is voluntary at Australian airports other than Sydney, for example Melbourne Airport chooses to use a slot system for international flights only.

Sources: ACA (2019b); DITCRD (2016a); IATA (2017b, 2018b).

7.2 Current regional access regimes at Sydney Airport

The regional ring fence

The regional ring fence, introduced in 1998, is a feature of the slot management scheme at Sydney Airport that reserves a number of slots (box 7.2) for airlines operating flights to or from regional New South Wales, with separate pools of slots for peak and off-peak periods.³ Its aim is to ‘... ensure equitable access to Sydney Airport for regional airlines’ (Sydney Airport Slot Management Scheme 2013 (Cwlth) Explanatory Statement, p. 3).

The maximum number of regional slots in legislated peak periods (weekdays from 6 am to 11 am, and 3 pm to 8 pm) was set at then-current levels in 2001. Airlines can only operate regional services in legislated peak periods using these slots. About 21 per cent of all slots in legislated peak periods were allocated for regional flights in the northern summer of 2018, and about 17 per cent in the northern winter of 2017, based on sample weeks of data (ACA, unpublished). The legislation prevents progressive swapping of peak-period regional slots for non-regional slots out of peak periods. It also prevents conversion of non-regional slots into regional slots during peak periods. Further details are provided in box 7.3.

³ The regional ring fence operates through the Sydney Airport Slot Management Scheme 2013 (Cwlth), made under subsection 44 (2) of the *Sydney Airport Demand Management Act 1997* (Cwlth).

Box 7.3 **Swapping and converting Sydney Airport regional slot series**

Sydney Airport's regional ring fence is implemented through slot series called permanent regional service series (PRSS).^a Airport Coordination Australia (ACA) is responsible for slot allocation.

Regional slots cannot be progressively swapped out of peak hours

Airlines can apply to ACA to swap the times of their slots. A slot that is part of a PRSS can only be swapped with a slot that is not part of a PRSS if the time of the non-PRSS slot is within 30 minutes of the time of the PRSS slot when it first became such a slot. This prevents the progressive swapping of PRSS slots out of peak hours^b in favour of interstate or international flights.

Regional slots can still be converted to non-regional slots

An airline that holds a PRSS has historical precedence to that slot series if the airline used it to operate a regional flight in the previous equivalent scheduling season.^c To ensure historical precedence for any slot, airlines must also meet a:

- 'use it or lose it' test — at least 80 per cent of slots must have been used
- 'size of aircraft' test — if there is an aircraft size requirement for the slot series, at least 80 per cent of the slots must have been used by an aircraft of at least that size.

If an airline that held a PRSS loses historical precedence, ACA must offer the PRSS to an airline that proposes to operate a regional flight. If an airline does not take up the offer, then the PRSS can be offered to an airline to operate a non-regional flight. The airline will not have historical precedence to the PRSS in the equivalent scheduling season immediately after it is used to operate a non-regional flight — the PRSS must again be offered to an airline operating a regional flight. If the PRSS has been used for a non-regional flight for two equivalent scheduling seasons in a row, the airline in the second equivalent scheduling season will gain historical precedence and the PRSS will be converted to non-PRSS.

Non-regional slots cannot be used for regional flights during peak hours

Non-PRSS can be converted to PRSS if the slot series was used for regional flights in the previous two equivalent scheduling seasons. However, an airline can only offer regional flights in non-PRSS during off-peak periods. These restrictions mean that new PRSS cannot be created in peak periods. Once a slot series ceases to be a PRSS in a peak period, this cannot be reversed.

<i>Allowed slot series conversions</i>	<i>Peak period</i>	<i>Off-peak period</i>
Regional → Non-regional	✓	✓
Non-regional → Regional	✗	✓

^a A slot series means five or more slots that authorise the same kind of aircraft movement at exactly or approximately the same time on the same day of consecutive weeks within a scheduling season. ^b Legislated peak hours are 6 am to 11 am, and 3 pm to 8 pm, on weekdays. ^c If the slot series was in a northern summer (roughly corresponding to April to October), this means the same slot series in the previous northern summer.

Source: Sydney Airport Slot Management Scheme 2013 (Cwth).

The regional price cap and price notification regime

Under the regional price cap and price notification regime, prices for aeronautical services and facilities are capped for airlines operating flights between regional NSW destinations and Sydney Airport. Sydney Airport must notify the Australian Competition and Consumer Commission (ACCC) before it can increase prices for these services.⁴ The regime applies to terminal and airfield charges (discussed in chapter 5), as well as other aeronautical services and facilities, such as hangars. The ACCC can object to a proposed price increase if it considers the increase would exceed the CPI-linked price cap, or if the increase is not required to recover the airport's costs of providing regional aeronautical services. The ACCC's decision to object to a proposal is not binding — Sydney Airport can still implement the price increase 21 days after notification (or longer if extended). Sydney Airport stated that the regime is designed to discourage it from increasing its prices in the event the ACCC opposes the increase, as doing so could lead to a formal ACCC pricing inquiry (sub. 53).

Sydney Airport has made three price notifications for regional aeronautical services since the regime was introduced in 2002. The ACCC did not object to two structural price changes as it concluded that they were unlikely to result in price increases (ACCC 2002, 2013c).

- In 2002, Sydney Airport sought to introduce an option for regional airlines to pay either a new single passenger facilitation charge (covering terminal facilities, apron parking and check-in counters), or the existing separate charges for the same facilities, which summed approximately to the proposed charge.
- In 2013, Sydney Airport submitted a price notification to restructure its charges to facilitate Qantas Group moving its regional flights from terminal 2 to terminal 3, and to allow Qantas Group to utilise apron parking services at terminal 2 only on occasion.

The ACCC did object to Sydney Airport's price notification in 2010 — a proposal to increase passenger facilitation, runway and security charges. The ACCC concluded that Sydney Airport did not demonstrate that the increase was required to recover costs, or that prices at that time signalled an inefficient use of airport assets by airlines operating regional flights (ACCC 2010). Sydney Airport decided not to proceed with its proposed price increase.

The price cap and notification regime has meant that regional aeronautical charges have not increased in nominal terms (Sydney Airport, sub. 53), and have fallen by 32 per cent in real terms from 2002 to 2018 (Commission estimate based on ABS (2018a)). Price-capped regional charges are currently about half of Sydney Airport's scheduled domestic aeronautical charges (or rack rates), at \$15.86 compared with \$34.08 per passenger return (Sydney Airport, sub. 53, pp. 80–81). The difference is likely smaller in practice as the actual charges that

⁴ The price cap and notification regime operates through Declaration no. 94 under section 95X and Direction no. 35 under section 95ZH of the *Competition and Consumer Act 2010* (Cwlth) (Treasurer 2016a, 2016b). Aeronautical services and facilities covered by the regime include aircraft-related and passenger-related services and facilities described in the *Airports Regulations 1997* (Cwlth). The price cap requires that the total revenue-weighted percentage increase in prices from 1 July 2016 should not exceed the total percentage increase in the CPI over the same period.

domestic airlines negotiate with Australian airports are likely to be lower than the published rack rates. The Australian Airports Association (AAA) estimated that domestic charges in the agreements of nine major Australian airports are, on average, 24 per cent lower than published rack rates (sub. 50, p. 32).

7.3 Effectiveness and efficiency of the regional access regimes

The regimes allow airlines to choose which regional routes to service

Governments can facilitate access for regional air transport by adopting policy settings that allow airlines to make commercial decisions on the regional routes they service or by supporting specific regional routes (box 7.4). The regional ring fence, and the price cap and notification regime, are examples of the former. Both policy approaches have costs and benefits.

Box 7.4 Examples of support for specific regional routes linked to Sydney Airport

NSW Government licensing for regional routes

The NSW Government requires airlines servicing routes connecting Sydney with Lord Howe Island and Moree to have a licence to operate (NSW Government, sub. 62). Route licences are provided on a monopoly basis to limit competition and provide route stability (TfNSW 2017b).

Airservices Australia Enroute Charges Payment Scheme

The Australian Government subsidises airlines to support low volume routes to regional and remote communities (DITCRD 2017). In March 2019, six routes linked Sydney and NSW regions under the Airservices Australia Enroute Charges Payment Scheme (DITCRD 2019b).

Rex Community Fare Scheme

Rex has partnered with 15 regional airports across Australia (including six in New South Wales) to improve fare affordability through its Community Fare Scheme (Rex 2019). For example, as part of its partnership with Griffith City Council, Rex offers a cheaper Community Fare on 25 per cent of seats booked at least 30 days in advance and all remaining seats one day before departure. This partnership also introduced an additional 10 weekly flights between Griffith and Sydney, and a new flight between Griffith and Broken Hill (Rex 2018b).

Tying assistance to a route can help develop specific regional routes and promote transparency by making the amount of assistance explicit, but it can come with costs and risks.

- It can impose additional red tape on airlines, which may discourage them from introducing new regional routes. The NSW Government has shifted away from regulating regional routes for this reason, and now only provides monopoly licences for two routes (box 7.4; TfNSW 2017a).

-
- Governments could ‘get it wrong’ when assessing which routes to support. They could provide support to a route that does not require assistance, or divert resources away from other regional routes that airlines might have serviced in the absence of government intervention.
 - Route-specific subsidies provided to airlines may give regional airports an incentive to raise their aeronautical charges to capture some of the value of the subsidy. This could lead to fewer flights on the route than if aeronautical charges remained unchanged.
 - External factors can mean that a route will not necessarily remain in operation even with assistance. Rex stated that it exited the Sydney–Mildura route due to increased charges at Mildura Airport (Rex 2018a), despite receiving assistance through the Australian Government’s Airservices Australia Enroute Charges Payment Scheme while the route operated (it is not covered by the price cap or regional ring fence) (box 7.4).

The regional ring fence, and the price cap and notification regime, are not tied to specific routes, and any airline operating flights between Sydney Airport and NSW regions can access them. This gives airlines the benefit of flexibility to adapt to changes in market conditions. The market for regional air transport is dynamic, with airlines entering and exiting routes over time. In some cases, declining patronage or rising costs have reduced the viability of air transport on specific routes, for example, in the withdrawal of the Sydney–West Wyalong route in 2007 (Rex 2007). The collapse of regional airlines has also changed regional routes. For example, routes connecting Sydney and five NSW regions were lost when Yanda Airlines terminated operations in 2001 and have not been serviced by other airlines since (TfNSW 2016, p. 4).

The Australian Government should retain the broad nature of Sydney Airport’s current regional access regimes as the approach avoids the complexity and costs associated with route-specific assistance. The current regimes allow airlines to switch between regional routes in response to changes in market dynamics. Nonetheless, there is scope for improvements to the regimes, as discussed below.

The ring fence supports regional access but should be improved

Flexibility to swap regional and non-regional slots supports efficient allocations ...

Reserving slots for regional flights comes at the cost of a less efficient allocation of limited airport capacity if the community more broadly places a higher value on using those slots for interstate or international flights. This trade-off was recognised in the 2012 joint study on aviation capacity in the Sydney region, which stated that ‘while the protection of regional access is an important policy objective, a large number of operations by small aircraft does not represent an efficient use of limited airport capacity’ (SCJSACSR 2012, p. 220). Melbourne Airport stated that:

The benefits of regional access being provided to aircraft in periods of high demand need to be weighed against the costs of those services being provided at different times, and the alternative services that are displaced. (sub. 33, p. 118)

Passenger numbers provide evidence of passengers' route preferences and the efficiency costs to the community associated with servicing regional routes. Data for Qantas Group, Virgin Australia Group and Rex show that there was an average of 30 passengers per aircraft movement on NSW regional routes in 2017, compared with 126 on interstate routes linking Sydney Airport (Commission estimates based on BITRE (unpublished)).

The effects of the ring fence on the efficient allocation of slots are larger during peak hours. Very few regional and non-regional slots are unallocated during the most in-demand peak hours of 7 am to 11 am and 5 pm to 7 pm on weekdays (based on sample weeks of data) (ACA 2017, 2018, 2019e). Airlines might be less inclined to fill remaining slots (either regional or non-regional) because they are in undesirable times or are not part of a consistent series of slots at the same time across several days of the week (SCJSACSR 2012). This makes it difficult to align flight schedules across multiple airports. Sydney Airport estimated that as many as 17 per cent of regional ring-fenced slots are not allocated (based on one week of data) (sub. 53, p. 105).

The current arrangements do offer some flexibility for airlines to seek out efficiency benefits. Specifically, there is scope to swap the times of regional slots with times of non-regional slots within 30 minutes of each other (box 7.3). Swapping a non-regional slot to a more in-demand time can improve efficiency if there are greater benefits to passengers and communities of having non-regional flights during those times.

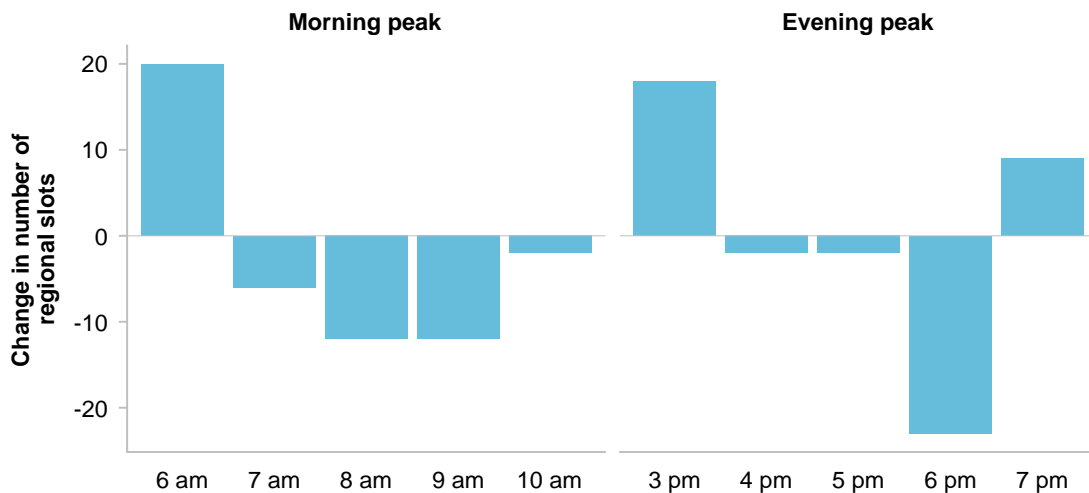
Data suggest that slot swaps have occurred over time, reducing the number of regional slots during the most in-demand peak hours. Between one sample week in the northern summer of 2001 and another in 2018, the total number of regional slots within the legislated peak periods of 6 am to 11 am and 3 pm to 8 pm fell by about 1.4 per cent (12 individual slots). The number within the most in-demand peak hours of 7 am to 11 am and 5 pm to 7 pm fell by 9.7 per cent (57 individual slots) over the same period, meaning that 45 regional slots had shifted into other hours within legislated peak periods (figure 7.2).

... but inflexibility in slot management inhibits development of regional routes

Elements of inflexibility in the slot management scheme can prevent the expansion of new and existing regional routes, even if it is in the interests of the broader community to develop them. As described above, regional slots have shifted into less desirable times within legislated peak periods. This could be positive for efficiency but unfavourable for regional access if it is important that passengers travelling between Sydney and NSW regions have access to air transport during the most in-demand peak hours. The availability of regional slots during these hours may also allow airlines to operate their aircraft more efficiently.

Virgin Australia Group suggested that slots within the hours of 7 am to 9 am and 5 pm to 7 pm are critical to operating convenient and viable regional air transport (sub. 54, pp. 25–26). This is because they enable passengers to make day trips to and from Sydney and facilitate schedules that support efficient aircraft utilisation and a competitive level of frequency.

Figure 7.2 **Change in NSW regional slots within legislated peak hours^{a,b}**
Northern summer scheduling season slots from 2001 to 2018



^a Legislated peak hours are 6 am to 11 am, and 3 pm to 8 pm, on weekdays. ^b Data based on two sample weeks. Numbers could differ when comparing different sample weeks.

Source: Commission estimates based on DITCRD (unpublished).

The current arrangements allow slots to be swapped and converted in favour of non-regional routes, but there is no opportunity to use non-regional slots for regional air transport during peak periods, even if this would have greater social benefits (box 7.3). This can result in fewer flights and less choice and competition on existing regional routes, or fewer regions with air transport (box 7.5).

Historical precedence provisions in the slot management scheme can also affect competition. Airlines are entitled to their slots from a previous scheduling season, provided they meet certain criteria (box 7.3). Some regional routes are large enough for multiple airlines to operate profitably, but incumbent airlines will face less incentive to operate their routes efficiently or offer lower prices to passengers if historical precedence provisions mean that they face less competition (NERA 2004). Historical precedence rules could have negative effects on competition in air transport more generally (section 7.5).

Data show that there has been little change in airline shares of aircraft movements across the three major airline groups (Qantas Group, Virgin Australia Group and Rex) on NSW regional routes over time (figure 7.3), which may be attributable to the inflexibility of the slot management scheme. Qantas Group and Rex had the largest shares of aircraft movements on NSW regional routes in 2017, at 43 and 46 per cent, respectively. Qantas Group had a larger and growing share of regional passengers, as it serves higher volume routes on average compared with Rex.

Box 7.5 Views on the effects of slot inflexibility on regional routes

Virgin Australia Group stated that it could not gain regional slots in desirable times.

Virgin Australia would like to expand services and/or improve schedules on some of its existing regional routes, as well as commence services to additional airports in NSW. However, the remaining [regional] slots available for allocation fall outside the peak periods and/or do not support the operation of commercially viable services. (sub. 54, p. 26)

Virgin Australia Group went on to comment on the negative effects of slot inflexibility on regional communities.

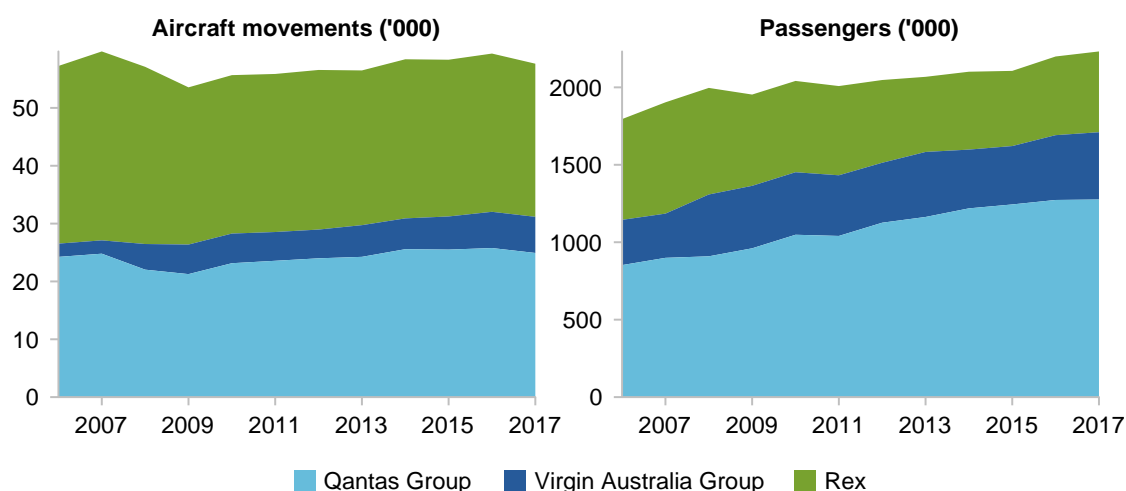
The unintended consequences of the Slot Management Scheme highlighted above are serving to inhibit the growth of sustainable air services to destinations in regional NSW, restrict scope for growth in competition, and risk the erosion of regional operations at [Sydney Airport] over time. It is therefore reasonable to conclude that the arrangements are not working in the best interests of regional passengers. (sub. 54, p. 26)

The 2012 joint study on aviation capacity in the Sydney region acknowledged that the current slot system restricts the development of new regional routes.

The current lack of unallocated protected regional slots in peak periods means no new intrastate services can be operated to Sydney in these times. For the communities involved, opportunities for improved access to professional services, business opportunities and connections between communities will be lost. As movement slots become less available by 2035, airlines are also likely to give preference to higher-yielding routes they can serve with larger aircraft. These routes may not necessarily correlate to the routes of greatest social benefit. (SCJSACSR 2012, p. 188)

Figure 7.3 Airline shares of NSW regional aircraft movements and passengers to and from Sydney Airport^{a,b}

Qantas Group, Virgin Australia Group and Rex, 2006 to 2017



^a Data are for city-pair routes, rather than routes as defined by flight numbers, and include diversions.

^b Qantas Group includes Qantas, Jetstar, Eastern Australia Airlines and Sunstate Airlines. Virgin Australia Group includes Virgin Australia, Virgin Australia Regional Airlines and Tiger Airways. Rex includes Regional Express and Air Link. Data are not available for other airlines servicing NSW regional routes.

Source: Commission estimates based on BITRE (unpublished).

Reforms to the regional ring fence

Many inquiry participants supported the ring fence's regional access objective (for example, AMAC, sub. DR95; Qantas Group, sub. 48, sub. DR115; SACF, sub. DR101; Sydney Airport, sub. 53, sub. DR112; Virgin Australia Group, sub. 54), although some identified unintended consequences, discussed above. Some inquiry participants questioned the value of the ring fence. The Australian Chamber of Commerce and Industry — Tourism, for example, said that it does little to protect regional air transport and suggested removing the ring fence '... as there is already overwhelming inflexibility imposed on Sydney Airport in relation to the management of movements' (sub. 28, p. 4).

The Commission considers that the ring fence should be retained, as it supports the Australian Government's objective of facilitating access to Sydney Airport for airlines operating regional flights. Without it there could be a reduction in regional flights in favour of interstate or international flights that are likely to be more profitable in peak times. Removing the ring fence might improve slot flexibility, but it would likely have negative outcomes for regional communities.

The slot management scheme is, however, unnecessarily restrictive — airlines cannot use peak-period slots reserved for non-regional air transport services for regional services. Virgin Australia Group recommended that:

... the Scheme is amended to provide that any available slot may be used to operate a regional service, regardless of the time of day. The operation of regional services utilising such slots would not, however, result in the creation of additional PRSS [permanent regional service series] slots under the Scheme, balancing the interests of regional and non-regional operations, and the productivity of [Sydney Airport]. While the proposed changes would not be expected to result in conversion of slots by airlines on a significant scale, the flexibility to do so would facilitate important competitive benefits for travellers to/from regional NSW. (sub. 54, p. 26)

Allowing airlines to use any peak-period slot for regional air transport services would enable airlines to more easily trial regional services in peak periods, more flexibly respond to changes in market demand on different routes, and use their aircraft more efficiently. Non-regional slots that are used for regional air transport should not become permanent regional ring-fenced slots as this would reduce the flexibility of these slots.

The Commission proposed this reform in its draft report. Inquiry participants supported the objective of regional access (for example, AMAC, sub. DR95; Sydney Airport, sub. DR112; Virgin Australia Group, sub. DR142), but some questioned the effect of the proposed reform on airline behaviour. The Australian Mayoral Aviation Council noted that airlines '... jealously guard their allocated slots lest they be occupied by another', and that under the Commission's proposed reform, '... any "available" slots would quickly disappear' (sub. DR95, p. 2). Sydney Airport stated that the reform:

... could lead to less efficient use of slots and encourage slot hoarding. For example, airlines with large fleets can game the system. They would be incentivised to use non-PRSS slots for regional

services wherever possible, and still enjoy the protections that the original PRSS slots enjoy. (sub. DR112, p. 27)

The Commission acknowledges that there could be a risk of airlines ‘slot hoarding’ under the current arrangements by, for example, strategically applying for more slots than needed and operating smaller aircraft to fill those slots (section 7.5). However, the proposed reform is unlikely to significantly increase that risk. The risk of slot hoarding highlights the need for a review of the slot management scheme to examine these incentives, and their effects on the efficient use of slots, in the context of the scheme as a whole (section 7.5).

There is also a possibility that the proposed reform would increase the number of slots used for regional services and lead to a less efficient use of slots, as raised by Sydney Airport. This would benefit passengers on regional air transport services, but could be less efficient from the perspective of the airport and other airport users. An increase in the use of slots for regional services is unlikely to occur on a large scale as airlines would only switch from a non-regional to a regional flight if it improves their profitability, taking into account the many factors that affect these decisions. An airline’s decision to switch is likely to align with the most efficient use of the slot for the airport by that airline, given the slot management scheme does not permit Sydney Airport to give a slot to another airline that would operate a route that would generate more revenue for the airport.

The major airlines that have a large number of slots are likely to benefit most from an increase in slot flexibility. The benefits for smaller airlines operating regional routes will be more limited, given the difficulty in obtaining new slots during the most in-demand peak hours and the potential for further competition on existing routes. Increased competition on existing routes and new regional air transport services would benefit passengers and regional communities more broadly. Overall, the benefits of the recommended reform are expected to exceed the costs.

Airlines that use non-regional slots for regional air transport under the Commission’s proposed reform should pay domestic aeronautical charges or negotiate charges with Sydney Airport, rather than pay the price-capped regional aeronautical charges. The Australian Mayoral Aviation Council considered that the higher charges would increase costs for regional air transport and present ‘... a substantial disincentive for potential passengers to utilise those services’ (sub. DR95, p. 3). However, aeronautical charges are a small proportion of airfares, and airlines have the ability to price discriminate between different types of passengers (chapter 2). The Commission considers that limiting price-capped regional aeronautical charges to permanent regional slots only would prevent the price cap and notification regime, and any associated costs (described below), from expanding due to a change in the use of slots. Future declarations relating to the regional price cap and notification regime should only apply to regional flights operated through regional ring-fenced slots.

RECOMMENDATION 7.1 USING ANY PEAK-PERIOD SLOT FOR REGIONAL FLIGHTS

The Australian Government should amend the Sydney Airport Slot Management Scheme 2013 (Cwlth) to allow peak-period slots that are not part of a permanent regional service series (PRSS) to be used for flights servicing regional New South Wales. These slots should not become PRSS slots when used for regional flights.

Future declarations relating to the regional price cap and notification regime should only apply to regional flights operated through PRSS slots after the current declaration ceases on 30 June 2019.

Costs and benefits of the regional price cap

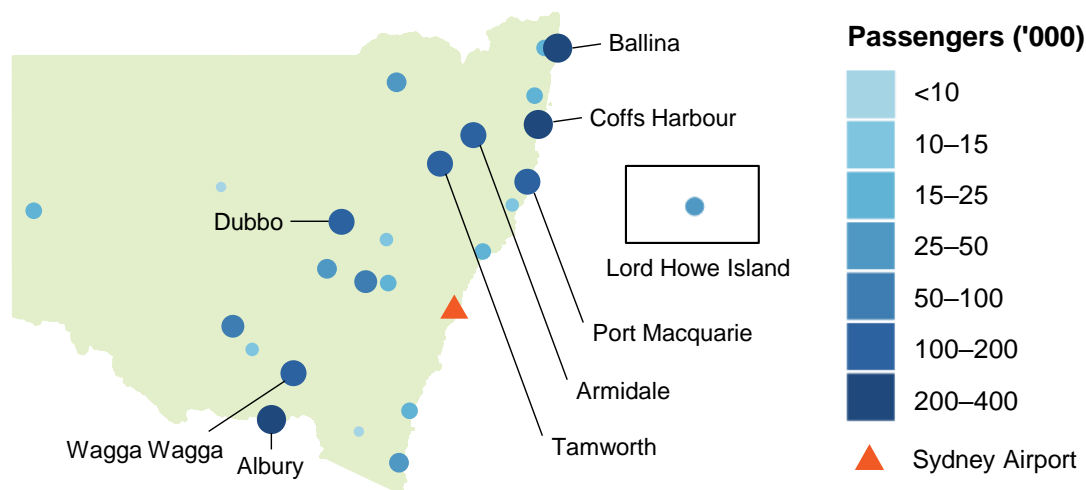
The price cap has limited benefits for regional air transport

Sydney Airport's regional price cap is only one consideration in airlines' decisions to service particular routes. Aeronautical charges affect the relative profitability of routes, but airlines also consider factors such as fuel and other operating costs, passenger demand forecasts, economies of scale, competition from other airlines and slot availability (Mills 2017). Airlines may choose to operate poorly performing routes if they are expected to become more profitable over a longer time period, or if no other uses of the aircraft are more profitable at the time (Mills 2017). Airlines also take into account their whole network of operations, including the role of a route in connecting passengers to other flights.

Regional routes with high passenger numbers may be less reliant on the price cap as airlines can spread their operating costs over a larger passenger base (Mills 2017). Passenger numbers can vary significantly on different regional routes (figure 7.4), with some having passenger numbers greater than interstate routes. For example, the Sydney–Ballina route had about 385 000 passengers in 2016 while the Sydney–Darwin route had about 319 000 passengers (BITRE 2018b). Some routes connecting regional areas are also able to operate without a price cap (for example, Albury–Melbourne and Coffs Harbour–Melbourne (Albury Airport nd; Coffs Harbour Airport 2017)).

Some regional routes serviced by smaller airlines and with low passenger numbers may rely more heavily on the price cap. Rex suggested that a difference of as little as \$3 per passenger in aeronautical charges is significant when considering the thin operating margins of regional air transport (sub. 63, p. 5). It noted that 30 000 passengers a year is the minimum required to sustain three return flights a day (Rex, sub. 63, p. 6). Of the 25 NSW regional routes in operation in 2016, 13 had less than 30 000 passengers a year (NSW BTS 2018). An increase in aeronautical charges would make these routes less viable. While the price cap might make marginal routes viable for airlines, it may also have little effect on airfares paid by passengers (chapter 2).

Figure 7.4 **Passenger numbers on routes between Sydney and NSW regions, 2016**



Source: Commission estimates based on NSW BTS (2018).

The efficiency costs associated with the price cap are uncertain

The costs of the price-capped regional charges, and who bears those costs, are not publicly transparent and estimates would rely on assumptions about how Sydney Airport allocates costs between regional and non-regional aeronautical services. The ACCC’s assessment of Sydney Airport’s proposed price increase for regional aeronautical services in 2010 noted that these assumptions were important, but contentious, in assessing whether Sydney Airport was under-recovering on regional aeronautical services (ACCC 2010). In relation to under-recovery, the ACCC only concluded that Sydney Airport was not under-recovering the combined costs of providing aeronautical services to all airport users.

A price cap could also result in underinvestment in, or a fall in the quality of, aeronautical services and facilities provided to airlines operating regional air transport services. The scope for this to occur is lessened by the fact that many regional aeronautical services are shared with airlines offering non-regional services, including the common-user domestic terminal 2 and terminal 3, which is used by Qantas Group (Sydney Airport 2018b). The quality of these aeronautical services and facilities must meet the standards of other airlines that use them. There might be greater scope for underinvestment in, or a fall in the quality of, aeronautical services and facilities that are not shared with other airlines. For example, Rex stated that airport operators could relocate regional aircraft parking areas further away from the terminal, which comes with an additional cost to airlines and inconvenience to passengers (sub. 63). Rex argued that there are inadequate protections against falling service levels, lost efficiencies and additional airline operating costs.

Inquiry participants had little desire to change the price cap. Sydney Airport supported regional airlines and acknowledged the importance of the existing NSW regional air transport network in its discussion of the price cap (sub. 53). Regional airlines also supported the price cap (RAAA, sub. 66; Rex, sub. 63).

Overall, the costs of the regional price cap are uncertain and the benefits appear to be limited to marginally profitable routes. Given the potential benefits at the margin, the price cap should be retained at this time for airlines using regional ring-fenced slots.

Rex stated that the price cap and notification regime ‘... should be permanent and not be subject to a renewal every 3 years as this creates unnecessary uncertainty for regional airlines and the regional communities that they service’ (sub. DR108, p. 12). The Commission considers that developments such as the opening of Western Sydney Airport (discussed below) give reason to reconsider the existing arrangements in the near future. Creating a permanent regime is not warranted at this stage, but the price cap and notification regime should be retained at this time.

Price notifications could discourage commercial negotiations

Sydney Airport raised concerns with the public nature of price notifications (sub. 53). The ACCC may request information such as financial models and cost allocation methodologies when conducting a price notification assessment. Some of this material can be treated on a confidential basis, but Sydney Airport’s proposed prices and other terms are made public (ACCC 2017b).

Sydney Airport stated that this can discourage commercially negotiated outcomes because airlines may not wish for their competitors to learn sensitive information (sub. 53). Sydney Airport suggested that outcomes reached through negotiations with airlines should not be subject to price notifications.

This could be achieved by amending Declaration 94 to explicitly exclude services provided under a commercial agreement arrived at between Sydney Airport and the provider of regional air services, where that agreement is confidential. Such an approach would ensure regional air service providers are in a better position than currently. They would retain the benefits of the current regime but could also maintain confidentiality over any agreement with Sydney Airport. The proposal would not provide to Sydney Airport an avenue to unilaterally increase charges. (sub. 53, p. 113)

As outlined in chapter 4, airport and airline operators typically engage in commercial negotiations to secure airfield and terminal agreements on charges, types of services, service quality and future capital investments. Encouraging commercial negotiations between Sydney Airport and airlines operating regional services could lead to better outcomes, including mutually agreed improvements in aeronautical services and facilities used by those airlines.

The proposal to exclude commercially agreed outcomes from the price notification process received support following the release of the draft report. The AAA and ACCC agreed that

it could facilitate commercial negotiations (AAA, sub. DR94; ACCC, sub. DR158). The ACCC said that it was ‘... unlikely to result in a weakening of the protection of regional services as airlines that do not have a commercial agreement with the airport will continue to be charged notified prices’ (sub. DR158, p. 21).

Rex said that the price cap and notification regime is working as intended but also supported the proposal to exclude commercially negotiated outcomes from the regime, as long as the safety net for regional airlines that do not have commercial agreements is preserved (sub. 63, sub. 72). Sydney Airport could be in breach of current price restriction laws under a number of conditions, including if it were to raise its prices for regional aeronautical services above the highest price in the past 12 months without submitting a price notification (*Competition and Consumer Act 2010* (Cwlth), s. 95Z). Rex further stated that any higher prices agreed through commercial negotiations should not be used as a benchmark for judging whether Sydney Airport has broken price restriction laws for regional airlines that do not have commercial agreements. Rex’s support was also conditional on the Australian Government providing an opportunity for stakeholders to comment on the drafting of any legislative instruments relating to this reform.

Overall, commercial negotiations would be facilitated by updating the price cap and notification regime such that it applies only to regional aeronautical services that are not covered in commercial agreements. Current arrangements for regional airlines that do not have commercial agreements should be preserved.

RECOMMENDATION 7.2 **COMMERCIAL NEGOTIATIONS FOR NSW REGIONAL SERVICES**

The Australian Government should ensure that future declarations relating to the regional price cap and notification regime at Sydney Airport only apply to aeronautical services that are not covered in commercial agreements between Sydney Airport and airlines operating flights servicing regional New South Wales, after the current declaration ceases on 30 June 2019. Future declarations should specify that prices in commercial agreements cannot be used to assess whether Sydney Airport has breached section 95Z of the *Competition and Consumer Act 2010* (Cwlth).

The Australian Government should consult with stakeholders about the drafting of any legislative instruments relating to this reform.

Western Sydney Airport may improve regional access in the long term

The regional ring fence, and the price cap and price notification regime, are among a range of factors that affect airlines’ decisions to service a regional route. The opening of Western Sydney Airport in 2026 may also affect these decisions in the longer term (box 7.6). Western Sydney Airport could provide greater opportunities to increase regional air transport in New South Wales: directly by providing alternative air transport services to regional areas; and indirectly if it leads to airlines moving services to western Sydney, freeing up capacity at

Sydney Airport. The AAA noted that Western Sydney Airport would ‘... provide significant competition to Sydney Airport for passengers, especially those in the western suburbs’ (sub. 50, p. 70).

Box 7.6 Western Sydney Airport

The demand for air transport in the Sydney region is forecast to double over the next 20 years. The cost to the Australian economy of not meeting this demand was estimated to be \$34 billion in forgone GDP by 2060.

The Australian Government committed up to \$5.3 billion over 10 years to develop a new airport at Badgerys Creek through a Commonwealth company. The new Western Sydney International (Nancy-Bird Walton) Airport is expected to open in 2026 with curfew-free operations, and a single runway and facilities able to accommodate 10 million passengers. A second runway is planned to be added as demand approaches 37 million passengers a year. The airport is expected to handle about 82 million passengers a year by 2063.

Sources: DIRD (2016); DITCRD (2018).

The extent to which Western Sydney Airport improves regional access depends on how substitutable it is with Sydney Airport. The regional aviation industry highlighted the importance of continued access to Sydney Airport for regional communities (RAAA, sub. 66; Rex, sub. DR108; Virgin Australia Group, sub. 54). For example, Virgin Australia Group noted that:

While this will offer opportunities for development of intrastate air services, the primary sources of demand for the foreseeable future will continue to be point-to-point travel between regional NSW and central Sydney and connections to domestic and international services at [Sydney Airport]. (sub. 54, p. 26)

The Commission’s next inquiry into airport regulation should consider the continued need for regional access arrangements at Sydney Airport in light of the development of Western Sydney Airport and any other future considerations. This analysis would be supported by implementation of the Commission’s recommendation to expand the monitoring regime to include data for Sydney Airport on costs and revenues in relation to the provision of aeronautical services for air transport to regional New South Wales (chapter 9). This proposal would allow the Commission and others to more easily evaluate the costs of the regional access arrangements against their benefits.

7.4 The movement cap and curfew

Aircraft movements impose negative noise externalities on people living near the airport and under flight paths (chapter 2). The Australian Government implemented a regulatory movement cap and curfew at Sydney Airport (box 7.1), as well as other measures (box 7.7), to manage the effects of aircraft noise on residents. The movement cap restricts the capacity of Sydney Airport to 80 movements an hour (in non-curfew periods). Airservices Australia

(ASA), which manages air traffic at Sydney Airport, aims to process 78 movements per rolling hour to ensure that the movement cap is not exceeded, after allowing for factors such as differences in aircraft speed (ASA, pers. comm., 8 January 2019). There were 203 occasions on which the number of actual movements in an hour reached 76 or more in 2018 (Commission estimates based on ASA 2019c). In general, the average number of actual movements exceeds 70 an hour only a few times a week during morning peak periods (figure 7.5). The curfew limits aircraft movements between 11 pm and 6 am, with only a small number of flights permitted, including pre-approved freight aircraft.

Box 7.7 Managing the effects of aircraft noise at Sydney Airport

In addition to Sydney Airport's movement cap and curfew (box 7.1), governments and the aviation industry have used other measures to reduce the effects of aircraft noise.

Long Term Operating Plan

Airservices Australia implements the Sydney Airport Long Term Operating Plan (LTOP) (Minister for Transport and Regional Development 1997). The LTOP aims to manage the effect of aircraft noise by operating flights over water and non-residential land as much as possible. When this is not practicable, the plan spreads aircraft noise across communities, providing periods of respite to residents by changing the mode of runway operations (ASA 2014). The LTOP includes targets for the percentage of aircraft movements in each direction from the airport.

Implementation of the plan is limited by safety considerations, weather, traffic congestion and other factors. The two parallel north–south runways are usually used during peak periods because they enable a greater number of aircraft to operate (ASA 2018c). The noise sharing target for the north has never been met due to these limitations (ASA 2012b, 2016).

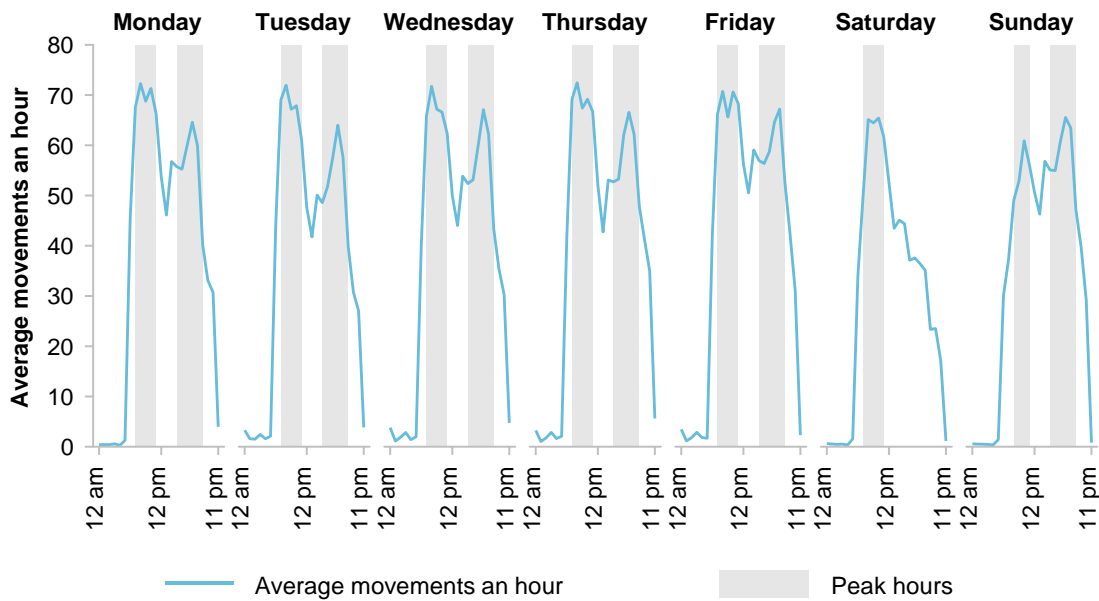
Other noise management measures

The Australian Government funded the insulation of 4083 eligible homes and 99 public buildings after the opening of Sydney Airport's third runway in 1995 (DITCRD 2014; Sydney Airport nd). This was partly funded by an aircraft noise levy on airlines (*Aircraft Noise Levy Act 1995* (Cwlth) and *Aircraft Noise Levy Collection Act 1995* (Cwlth)).

Recent developments in the aviation industry, such as quieter aircraft technology, have also helped to reduce noise (ASA and AAA nd). Tightening noise certification requirements along with political pressure mean that aircraft manufacturers can find it difficult to sell new aircraft unless they adopt new technologies (Future Airport 2016). The Boeing 787, introduced in 2011, is up to 7–8 dB quieter, on average, on departure than the aircraft models it was designed to replace (CAA 2014, p. 2).

Sydney Airport works with governments and the community to address noise concerns, including through the Sydney Airport Community Forum, which was established to address the effects of aircraft noise (SACF 2018).

Figure 7.5 **Average hourly movements at Sydney Airport by day of the week^{a,b}**
2018



^a 'Peak hours' are hours in which Airservices Australia considers managing air traffic using parallel runway operations. Actual times of use may differ. ^b Data include all movements at Sydney Airport in 2018, including those that are exempt from the movement cap. The average number of movements differs slightly between slot scheduling seasons for the northern winter and northern summer.

Source: Commission estimates based on ASA (2019c).

The Commission's draft report canvassed a number of reforms to the movement cap and curfew and invited participants to respond with their views. Inquiry participants held contrasting opinions on the merits of reform (box 7.8). Sydney Airport and airlines supported changes to the movement cap that address some of its unintended consequences, such as recovery from delays (described below). Many inquiry participants, particularly residents of Sydney, highlighted the importance of the current regulatory constraints in managing the effects of aircraft noise. There was strong resistance from the residents of Sydney to any change that would relax the regulatory constraints.

The effects of aircraft noise on residents are important in assessing the merits of any reform to the regulatory constraints. The Commission has examined whether there are any reform options that could balance these contrasting views and improve the welfare of the broader community, including passengers and the efficiency of airport and airline operations, without increasing the effects of aircraft noise on people living and working in Sydney.

Box 7.8 Views on Sydney Airport's regulatory constraints

Residents living near Sydney Airport and their representatives highlighted the importance of Sydney Airport's regulatory constraints. For example:

The Sydney Airport constraints are absolutely mandatory now and in the future to support a reasonable life in Sydney which is extensively impacted by aircraft noise and aircraft emissions. (NAN, sub. 11, p. 1)

There is a very large social and economic cost of having thousands of people woken and/or unable to sleep within a city due to aircraft noise. (NAN, sub. DR120, p. 3)

The existing regulations were put in place to strike a balance between the competing demands of the aviation industry and the community's health and amenity following the opening of the Third Runway, and within this context they are working as intended. (Clarke, sub. DR102, p. 3)

These measures aim to limit and ameliorate the damaging effects of aircraft noise by minimising and limiting the amount of noise suffered by individuals and households, by providing at least some period of relative respite and relief from constant aircraft noise, and by aiming to fairly share the residual noise burden across different parts of Sydney. Without these measures, Sydney would not be a liveable place for between half a million and a million residents. (Hayes, sub. DR98, p. 1)

The Sydney Airport Community Forum noted that current constraints are not able to meet some noise objectives.

... the parallel [runway] operations are used excessively and the noise sharing objectives of the [long term operating plan] are not being met. There is indeed a strong case that a lower cap should be specified outside of peak periods to enable more effective sharing and noise objectives to be achieved. (sub. DR101, pp. 3–4)

Sydney Airport questioned whether the various constraints effectively met their objectives.

The collective intent of the Slot Scheme, the [regional ring fence] and the Caps was that within fixed constraints that would mitigate noise impacts and ensure regional access, slots would be allocated to maximise the volume and economic value of the services operating to and from Sydney Airport.

It has become increasingly clear over a number of years that the interaction of the Slot Scheme, the Caps, the [regional ring fence] and other operating restrictions actively prevent the fulfilment of any of these objectives. Instead, these operating restrictions produce worse outcomes for passengers, airlines, Sydney Airport and the community, and significant negative impacts on the broader aviation network and overall national productivity. (sub. 53, p. 104)

Some inquiry participants described the widespread effects of Sydney Airport's constraints.

[Sydney Airport's constraints] cause most of the delays at Sydney Airport and not only prevent its on-time operations from recovering after bad weather disruptions but cause delays at airports around Australia because four out of every ten planes in Australia fly through Sydney at least once each day. So even though Sydney Airport is a major competitor to Canberra Airport, we feel the negative effects of its inefficiencies and delays ... (Canberra Airport, sub. 3, p. 3)

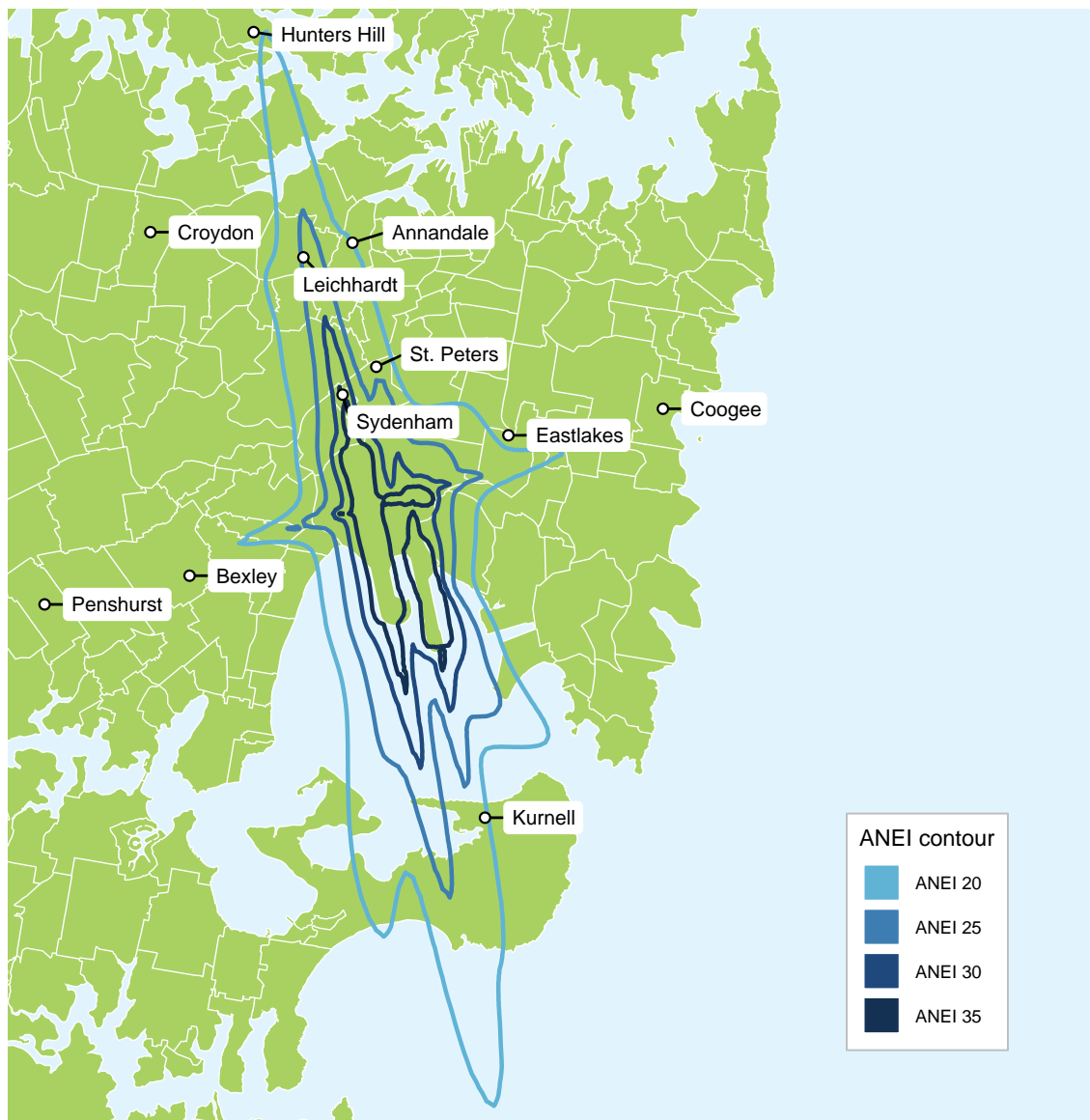
Other participants acknowledged the importance of noise management but suggested the arrangements be reviewed in light of new technologies that reduce aircraft noise.

Operational restrictions that apply to Sydney Airport, such as the hourly aircraft movement caps, should be reviewed periodically to ensure they remain appropriate, so as to reflect technological advances that reduce aircraft noise. This would provide policy makers with opportunities to consider whether the operational restrictions are fit-for-purpose in balancing all relevant policy objectives, including operating efficiency and noise management. (ACCC, sub. 59, p. 57)

Regulatory constraints help to manage the effects of aircraft noise

Sydney Airport's proximity to residential areas means that aircraft noise affects a large number of suburbs. ASA estimated that about 96 000 Sydney residents lived within an Australian Noise Exposure Index contour in 2017 and were significantly affected by aircraft noise (ASA 2017, p. 10) (figure 7.6). Noise affects many more people outside of these contours.

Figure 7.6 **Noise exposure contours around Sydney Airport^a**
2018



^a Australian Noise Exposure Index (ANEI) contour maps show the average daily aircraft noise exposure index using actual, historical aircraft noise levels around the airport for that year. ANEI contours are based on community reaction to aircraft noise, where a higher ANEI level represents a higher level of community concern to aircraft noise.

Sources: ABS (2016); ASA (unpublished).

Residents underneath a flight path in Sydney in 2018 experienced, on average, one disruptive noise event every 14 minutes, or about 70 noise events across the airport’s non-curfew period each day (box 7.9) (Commission estimates based on ASA 2019c). Residents who live closer to the airport experience more noise. For example, a resident of Sydenham, which is directly north of Sydney Airport’s parallel runways, experienced a disruptive noise event every six minutes, or 195 noise events, on average each day in 2018. The average noise level of these events was 87 dB(A) (box 7.9). Residents in the more populous suburbs of Hunters Hill and Annandale experienced an average of about 80 daily noise events in 2018, with an average noise level of 74 dB(A) (Commission estimates based on ASA 2018b, 2019c).

Improvements in aircraft technology have decreased the noise level per aircraft (box 7.7). However, they may not have had significant benefits for residents in practice. The Sydney Airport Community Forum noted that ‘the difference in decibel output of the so called quieter aircraft is not large, and often undetectable’ (sub. DR101, p. 5). Further, the number of aircraft movements has increased by 12.4 per cent since 2008 and the average number of aircraft noise events above 70 dB(A) across Sydney also increased over the same period — by 16.3 per cent (Commission estimates based on ASA 2019c). These increases may have counteracted the effects of improvements in technology on the noise level to some degree.

Box 7.9 How is noise measured?

The standard measurement for sound is the decibel (dB). Decibels are reported on a logarithmic scale — every 3 dB increase represents a doubling of ‘sound intensity’. Decibels are often adjusted to account for how the ear responds to different frequencies. For example, ‘A-weighted decibels’ (dB(A)) reduce the weight given to low and high frequencies. This measure is often used for noise regulation because it is considered to be better correlated with the relative risk of hearing loss.

Decibels are a useful way to measure energy but there is a disconnect between decibels and how noise is perceived. For instance, an increase in 10 dB is equivalent to a tenfold increase in energy but is perceived by the human ear to be only twice as loud. Providing examples of noise events can be the best way to communicate the effects of noise events because of this disconnect.

One common measure for the effects of noise on communities is to count the number of noise events louder than 70 dB(A) because this is the level at which conversations and associated activities can be disrupted. This is the same loudness as a vacuum cleaner 1 metre away or a car traveling 60 km/h 7 metres away. A food blender or a motorcycle 8 metres away are 88-90 dB(A). A normal conversation 1 metre away is 60–65 dB(A).

A measure called ‘effective perceived noise in decibels’ (EPNdB) is used for aircraft noise certification purposes. EPNdB is designed to capture annoyance from aircraft noise, taking into account how people respond to its duration, intensity and other aspects of sound.

Sources: ICAO (2006); Noise Help (2019).

Inquiry participants suggested that any reform to the movement cap or curfew must consider costs to community productivity, amenity, health and wellbeing (AMAC, sub. DR95; SACF, sub. DR101). They highlighted the adverse physical and psychological health and lifestyle outcomes due to noise from loud and frequent aircraft movements (SACF, sub. DR101).

Participants also pointed to research into the health effects of aircraft noise (Clarke, sub. DR102; NAN, sub. DR142; Patrinos, sub. DR147; SACF, sub. DR101; Sutherland Shire Council, sub. DR155). This research has found that disruptive noise events can have negative effects on health, including mental and social wellbeing (Morrell, Taylor and Lyle 1997; SSCANS 1995). Noise levels as low as 40 dB(A) at night and 63 dB(A) during the day have been linked to poor cardiovascular health or hypertension (Greiser, Greiser and Janhsen 2007; Hansell et al. 2013). A systematic review commissioned by the Department of Health found that 15 out of 19 observational studies established a statistically significant association between exposure to aircraft noise and adverse cardiovascular outcomes (enHealth 2018, p. 41). Despite these strong associations, causal relationships have not been established (enHealth 2018) and results on the size of the effects tend to be limited and inconclusive (Basner et al. 2017). Other research suggests that aircraft noise may also disturb sleep and affect cognition (enHealth 2018).

Formal research into the views of Sydney residents is limited (box 7.10). This makes it difficult to gauge the relative costs and benefits of policy alternatives that affect noise events. There may be a case for new research to gain a better understanding of how sensitive residents are to aircraft noise, how this might change over the course of the day (not just between night and day) and how well measures like the Australian Noise Exposure Forecast capture community reaction compared with measures like the number of flights (Hede 2018a, 2018b).

Box 7.10 Limited research on reactions to noise around Sydney

There is relatively little research about how communities around Sydney Airport value different aspects of aircraft noise, such as frequency, level and periods of respite. The most recent, significant, survey into noise at Sydney Airport was published in 1982 (Hede and Bullen 1982). Relying on these data to make policy decisions could be problematic if people have become more or less sensitive to noise over time.

Some residents of Sydney and their representatives impressed on the Commission the importance of the curfew for an unbroken night's sleep (Clarke, sub. DR102; Inner West Council, sub. DR96; NAN, sub. DR120; SACF, sub. DR101). Hayes noted that sleep is easily disrupted by aircraft movements and that the frequency of noise events is an important aspect of noise pollution (sub. DR98).

Research from overseas examines the relative importance of night-time noise and frequency of noise events. Studies show that measures of noise that penalise night-time noise by twice as much as during the day account for the degree of annoyance that people feel (Miedema, Vos and de Jong 2000). In addition, survey results from the United Kingdom show that people are increasingly concerned about the number of noise events from aircraft (COAG 2012).

The regulatory constraints can lead to some undesirable outcomes

The inflexibility of regulatory constraints could compound delays

Some inquiry participants commented that the movement cap and curfew have unintended consequences. They can exacerbate delays when there are disruptions, such as those due to weather events (Sydney Airport, sub. 53; Virgin Australia Group, sub. DR142). Delays can lead to significant costs for airlines and passengers. For example, aircraft arriving after the curfew may be forced to re-route (BCA, sub. 45) or passengers might require overnight accommodation (TTF, sub. 6).

Sydney Airport said that it can absorb some delays and early arrivals, but the inflexibility of the movement cap makes it difficult to absorb significant delays of multiple flights. Sydney Airport cited two major disruptions that occurred in 2017 due to weather and an air traffic control software failure. Some curfew dispensations were granted to affected airlines (DIRDC 2017), but collectively these incidents led to about 230 flight cancellations, numerous delays and tens of thousands of affected passengers nationwide. On-time performance fell to 40 and 23 per cent on the days of the incidents, respectively, compared with an average of 76 per cent (Sydney Airport, sub. 53, p. 106).

The extent to which the movement cap is responsible for compounding delays is complicated by other factors. ASA indicated that the current infrastructure (including taxiway, apron and gate capacity) can struggle to handle movements close to 80 an hour for sustained periods (SCJSACSR 2012, p. 119). Weather can reduce this capacity to 60 or even 40 movements an hour (ASA 2012c). Airlines may also delay, consolidate or cancel flights in response to disruptive events. These decisions can interact with airlines' schedules, physical capacity constraints and operational constraints, such as turnaround times, at other airports. Delays can cascade across Australia's aviation network, due to the high number of aircraft that pass through Sydney Airport. Events that cause diversions to other airports displace aircraft and crews, which affect the broader network and lead to more cancellations (ASA 2012c). These decisions and flow-on effects may constrain movements below 80 in the hours following a disruption.

The Commission's analysis shows that there were relatively few times when the movement cap may have constrained recovery from a disruptive event in 2018 (table 7.1). There were only 12 times, out of 104 disruptive events in 2018, when the number of movements was 76 or more in the hours afterwards (Commission estimates based on ASA 2019c).

Table 7.1 Disruptive events at Sydney Airport^{a,b,c}
2018

Duration of disruptive event	Total number of events	Number of events in which the number of actual movements after the event reached ...		
		80	78–79	76–77
1 hour	44	2	2	4
2 hours	22	1	0	0
3 hours	18	1	0	1
4 + hours	20	1	0	0

^a Data on actual movements include movements that are exempt from the movement cap. ^b Data on disruptive events only capture events that caused delays to aircraft arriving at Sydney Airport. The causes of these events (including weather and technical failures) are likely to have led to delays to departing aircraft as well. Events that only caused delays to departing aircraft were not observed in the data. ^c The Commission examined the number of disruptive events in which the number of movements reached at least 76 in the hours afterwards to avoid underestimating how often the movement cap was a constraint.

Sources: Commission estimates based on ASA (2018a, 2019c).

Difficulty obtaining desirable slots creates issues for Sydney Airport and airlines

Airlines need suitable slots at both origin and destination airports to operate a flight. Yet the movement cap, in conjunction with slot management rules, can prevent airlines from obtaining consistent slots in preferred times. Sydney Airport stated that this artificially amplifies the peak period because an airline may schedule its arrival before and departure after the peak period instead (sub. 53). This can increase Sydney Airport’s operating expenditure and costs for airlines that occupy key infrastructure for longer, and decrease service quality.

Changes to the movement cap that enable greater flexibility in the scheduling of movements may allow for the more efficient use of existing airport infrastructure and aircraft. However, physical capacity constraints mean that a large increase in the number of movements in peak times would likely require additional infrastructure. The 2012 joint study on aviation capacity in the Sydney region indicated that the airport’s sustainable capacity for scheduled services was about 85 actual movements an hour, provided adequate gate and taxiway capacity is available (SCJSACSR 2012, p. 119). ASA’s analysis suggested that 90 movements an hour would create taxiway congestion and an unacceptable amount of delay due to inadequate gate and runway capacity (ASA 2012a).

The frequency of measurement of the movement cap has costs

The movement cap is currently measured on a 15-minute rolling hour basis — there are effectively four ‘regulated hours’ within any non-curfew 60-minute period. ASA stated that it employs staff, who are rostered from 6 am to 9 pm every day of the week, to count movements and advise the tower shift manager if the movement cap is likely to be reached within any 15-minute rolling hour (pers. comm., 7 June 2019). It is a significant compliance

cost for ASA to ensure that actual movements do not breach the cap. ASA is examining the possibility of automating this function with the introduction of Airport Collaborative Decision Making (pers. comm., 7 June 2019).

The 15-minute rolling hour measurement also affects the wider community. As described above, ASA takes a conservative approach and aims to process 78 actual movements an hour, even though 80 scheduled movements an hour are permitted. When the number of actual movements approaches the movement cap at each 15-minute interval, any necessary delay is applied to departing aircraft (while arriving aircraft are unaffected) (ASA, pers. comm., 7 June 2019). This affects airlines and people travelling from Sydney and, in some cases, beyond.

The curfew exemptions do not permit larger yet quieter aircraft to operate

The Sydney Airport Curfew Act permits the use of one type of jet aircraft (the British Aerospace 146 (BAe-146)) for freight operations during the curfew (box 7.1), but not other aircraft that are as quiet and potentially larger. This is more restrictive than freight aircraft exemptions for the curfews at Adelaide and Gold Coast airports, which are based on noise and weight restrictions (*Adelaide Airport Curfew Act 2000* (Cwlth); Air Navigation (Gold Coast Airport Curfew) Regulations 2018 (Cwlth)).

Australia Post stated that the BAe-146 restriction creates additional aircraft movements using low capacity aircraft and adds significant costs to all freight routes into and out of Sydney. The BAe-146-300QT has freight capacity of about 12 600 kg and is compliant with the International Civil Aviation Organization's chapter 3 noise standards, while an alternative freight aircraft, the Boeing B737-300SF, has freight capacity of about 18 500 kg and is compliant with the more stringent chapter 4 noise standards. Australia Post also stated that the smaller BAe-146 jets are further restricted during periods of inclement weather, which results in additional delays to time critical consignments. In some cases, this has delayed the movement of critical medical products needed to support surgical schedules at major hospitals (Australia Post, pers. comm., 18 January 2019).

The Sydney Airport Curfew Act allows a prescribed list of business jet aircraft to operate during curfew hours (box 7.1). While this list was updated in 2015 to allow newer and quieter aircraft to operate (Sydney Airport Curfew (Curfew Aircraft) Instrument 2015 (Cwlth)), it retains the requirement that business jet aircraft remain under a specified weight. The Australian Business Aviation Association (ABAA) noted that this weight was chosen with reference to a particular type of business jet in general use in 1995 and that it prevents newer, quieter and more fuel efficient jets operating during the curfew (sub. DR110, p. 3).

The regulatory constraints have other unintended consequences

The Tourism and Transport Forum (sub. 6) said that aircraft that arrive ahead of schedule (due to catching a tailwind, for example) may be forced to delay their landing to avoid breaching the curfew. This creates costs associated with excess environmental emissions and

unnecessary fuel burn. The Tourism and Transport Forum also stated that this creates additional noise, but others indicated that there is no noise effect because aircraft are placed in holding patterns away from Sydney or over water (Clarke, sub. DR102; SACF, sub. DR101). The Sydney Airport Community Forum said that:

On flight management systems can be used to very accurately time the arrival of aircraft. However, occasionally aircraft do arrive before the end of the curfew, or the availability of their slot, and are forced to hold. These holding patterns, by definition, have to happen at a height and distance well removed from the runways for operational reasons. (trans., p. 294)

Sydney Airport (sub. 53) noted that the movement cap may cause aircraft to be held while waiting for the next rolling hour. As noted above, ASA stated that any delays necessary to comply with the movement cap are applied to departing aircraft, not arriving aircraft (pers. comm., 7 June 2019). This means that any costs associated with aircraft placed in holding patterns are not due to the movement cap.

Is there a way to improve outcomes for airport users and residents?

The Commission canvassed a number of reform options in its draft report and sought feedback on their costs and benefits. These options included:

- implementing a daily movement cap (with an average of 80 scheduled and actual movements an hour during non-curfew hours) rather than the current hourly cap
- retaining a cap on the number of scheduled movements but allowing the number of actual movements to differ in response to delays
- excluding regional flights from the movement cap.

The Commission drew on analysis and consultations following the release of the draft report and assessed these options from the perspective of how they affect noise experienced by residents, passengers' travel times and airport and airline efficiency. Reforms should aim to balance the preferences of residents, passengers (some of whom are local residents), Sydney Airport and airlines. A reform that enables airlines to operate more services or allows more passengers to travel during their preferred times would benefit passengers and improve the efficiency of airport and airline operations. A reform that enables the airport and airlines to catch up more quickly after disruptive events could reduce Sydney Airport's and airlines' costs, changes to passengers' schedules and flow-on effects for Australia's aviation network. These reforms could also change the number of noise events that residents experience.

A daily movement cap could allow airlines to operate more services and more passengers to travel during their preferred times. Sydney Airport said that a daily movement cap would also improve operational efficiency and improve delay recovery times (sub. DR112). An Airbiz study commissioned by Sydney Airport found, for example, that:

... for a 3 hour disruption commencing at 3pm, it would take until 11am the following morning to clear the backlog of delayed flights under the movement cap as currently administered. Moving

to a daily cap would allow full recovery at 10:47pm on the same day. (Sydney Airport, sub. DR112, p. 21)

As described above, however, there were relatively few times when the movement cap may have constrained recovery from a disruptive event in 2018. Further, airline crew displacement, airline cancellation decisions, and physical and operational constraints at Sydney Airport, can also prolong the time taken to recover from disruptive events. Shifting to a daily movement cap could also increase the number of actual movements, particularly during peak periods, which would create more noise during those periods. While there may be scope to address some of this noise effect through a change to slot allocation procedures (Sydney Airport, trans., p. 224), it is likely that movements and noise would nonetheless increase.

Some inquiry participants were open to retaining a cap on scheduled movements only, but not on actual movements (for example, BARA, sub. DR92; BCA, sub. 45; Virgin Australia Group, sub. DR142). This would mean that no more than 80 movements would be planned for any given rolling hour, but the actual number of movements would be allowed to exceed this number. This would allow departing aircraft that are delayed under the current arrangements to take off as required, subject to other constraints.

As with the daily movement cap option, the benefits to passengers, airports and airlines may be small under this reform, given the movement cap is only one of many factors that constrain recovery from disruptions. The reform would also change the number of noise events that residents experience and the times in which they occur when airlines are running off schedule. The Sydney Airport Community Forum stated that ‘it is actual and not scheduled movements that create noise pollution — caps on actual and not scheduled movements need to be tracked, managed and regulated’ (sub. DR101, pp. 7–8).

A further reform option is to create new slots in excess of the 80 movement cap specifically for quieter turboprop aircraft used for regional air transport (Forsyth, sub. 15). Sydney Airport supported excluding regional ring-fenced flights from the movement cap (sub. DR112). This reform option would likely increase the total number of movements and, even though regional aircraft tend to be quieter, inquiry participants have voiced concerns about the number of flights, not only how loud an individual aircraft is (box 7.10). Therefore, this option would likely have a negative effect on some residents.

Overall, reform options such as implementing a daily movement cap or retaining a cap only on scheduled movements would have benefits to the aviation industry and passengers using air transport services in Australia, but it is unclear that these would outweigh the costs to residents based on currently available information. This is because the movement cap is only one of many explanations for issues that participants identified, such as delays, and there is a lack of information on how changes in noise patterns throughout the day would affect residents.

Measuring the movement cap once an hour could provide net benefits

There is a case for reform to the measurement of the movement cap — this can be done without changing the limit on the actual number of movements and would make it more likely that the intended 80 actual movements an hour could be achieved. A reform that requires ASA to measure the cap on actual movements only once (rather than four times) an hour would allow ASA to process movements more smoothly and less conservatively, and reduce its compliance costs. This reform would also reduce any necessary delays to departing aircraft that are caused by the movement cap, both during regular peak periods and after disruptive events, benefiting airlines and their passengers. The cap would ensure that the number of actual movements within a 60-minute period starting on the hour does not exceed 80.

A rationale for the 15-minute rolling hour is to evenly spread *actual* movements, and thus noise effects, over an hour. Even without this requirement, ASA would take into account physical and operational factors that constrain the frequency of actual movements on the day of operations. These factors include the capacity of airport infrastructure, and standards for the time required between actual movements based on the mix of aircraft size, aircraft performance, and the mix of landings and take offs (ASA 2012a).

ACA uses the 15-minute rolling hour when *scheduling* movements at Sydney Airport in advance. This has the benefit of making it easier to spread scheduled movements across an hour, before factors that will affect actual movements on the day of operations are known. This is not unique to Sydney Airport — guidelines for other airports similarly affect the number of movements that can be scheduled within a certain amount of time (for example, ACA 2019c, 2019d, 2019a). Removing the 15-minute rolling hour for *actual* movements would not affect the ability for ACA to continue its approach of using a 15-minute rolling hour to *schedule* movements at Sydney Airport.

Overall, the Commission assesses that there would be a net benefit to the community at large from increasing flexibility by measuring the number of actual movements only once an hour.

RECOMMENDATION 7.3 MEASURING SYDNEY AIRPORT'S MOVEMENT CAP ONCE AN HOUR

The Australian Government should amend section 6(2) of the *Sydney Airport Demand Management Act 1997* (Cwlth) to define a regulated hour as a period of 60 minutes starting on the hour.

Alternative types of freight aircraft should be allowed during the curfew

Many inquiry participants noted that a curfew is important to protect the health and wellbeing of residents in Sydney. Some residents were open to making exceptions to the curfew for slightly delayed flights, to avoid redirecting flights and disrupting passengers (Barnard and Hamilton, sub. DR146; Heath and Heath, sub. DR137; McWilliam and Miller, sub. DR126), while others did not want any change to the curfew (Armstrong and Coles, sub. DR127;

Hunters Hill Trust, sub. DR140; Kavanagh, sub. DR132; Miao and Micklethwaite, sub. DR135).

Qantas Group suggested amending curfew dispensation guidelines to include ‘... weather, aircraft serviceability, security, safety, airport infrastructure constraints and force majeure’ (sub. DR115, p. 34). The guidelines already allow dispensations in some of these circumstances, provided they were unforeseeable. Clearer guidance or flexibility in the application of the guidelines may help reduce the costs to passengers and airlines from redirected flights.

There would be benefits from allowing alternative types of freight aircraft to operate during the curfew, provided they do not increase aircraft noise above current levels and the number of aircraft movements does not exceed the current cap. Qantas Group and Virgin Australia Group supported this proposal following the release of the draft report (Qantas Group, sub. DR115; Virgin Australia Group, sub. DR142).

In addition to providing air freight operators with increased flexibility, this proposal has the potential to reduce the night time noise exposure for communities surrounding Sydney Airport, as there are other types of dedicated freighter aircraft in operation with lower noise profiles than the BAe-146 aircraft. (Virgin Australia Group, sub. DR142, p. 14)

Sydney residents who participated in the inquiry considered that retaining the cap on freight aircraft movements was essential if other types of freight aircraft were permitted during the curfew (AMAC, sub. DR95; Clarke, trans., p. 250; SACF, trans., pp. 296–297).

The Australian Government should introduce noise standards for freight aircraft that would allow alternative types of freight aircraft to operate during the curfew, provided they do not increase aircraft noise above current levels. Such a reform could be implemented in a number of ways. For example, the noise limit could be based on the amount of noise produced by the BAe-146 according to International Civil Aviation Organization noise certification procedures (ICAO 2018). Alternatively or additionally, there could be limits on the amount of noise created during take off and landing that are no higher than the BAe-146. Freight aircraft exemptions during the curfew at Adelaide and Gold Coast airports, which are based on noise and weight limits, could serve as useful starting points for the Commission’s proposed reforms to the curfew at Sydney Airport. The Australian Government should consult with stakeholders before introducing this proposed reform, as required under the Sydney Airport Curfew Act.

Introducing noise standards for freight aircraft would allow alternative types of freight aircraft that are no louder (but are potentially larger) than the BAe-146 to move through Sydney Airport at night. This would benefit consumers, freight service providers, the airport and the community more broadly. The Commission proposes that the current cap on the number of freight aircraft movements (74 a week) be retained, so local residents would not be affected by an increase in the number of actual movements, noise events or noise levels.

The Australian Government should put in place new freight aircraft noise limits by the end of 2020. These arrangements would only last until Western Sydney Airport is open for night use, as currently stated in the Sydney Airport Curfew Act (box 7.1).

RECOMMENDATION 7.4 ALTERNATIVE TYPES OF FREIGHT AIRCRAFT DURING THE CURFEW

The Australian Government should amend the *Sydney Airport Curfew Act 1995* (Cwlth) to introduce noise standards for freight aircraft allowed during the curfew, rather than specifying only one type of freight aircraft (the British Aerospace 146). The noise standards should allow alternative types of freight aircraft to operate during the curfew, provided they do not increase aircraft noise above current levels, or the number of freight aircraft movements above the current cap (74 a week).

The new freight aircraft noise standards should be in place by the end of 2020.

Benefits of changing other curfew exemptions might not outweigh the noise effects

The ABAA suggested that the existing curfew exemption for business jets should be reconsidered (sub. DR110). It proposed the aircraft weight limit be removed or increased (while retaining noise limits) to allow newer, quieter and more fuel-efficient long-range business jets to operate. The ABAA considered that the noise effect would be limited because aircraft are required to take off and land over Botany Bay during the curfew, and the use of different approach manoeuvres could bring approaching aircraft over the west of, rather than over, the suburb of Kurnell (trans., pp. 305–306).

However, it cannot be guaranteed that noise will not increase with ABAA’s proposed change. Any increase in the number of aircraft movements may still affect residents living near flight paths. Current curfew exemptions limit the number of freight aircraft movements but do not limit the number of business jet movements during the curfew. Although a reform to business jet curfew exemptions would benefit business jet passengers, it may come at a cost to residents by increasing the number of movements and aircraft noise. Any change to the weight limit for the business jet curfew exemption should only be considered after further analysis and community consultation, including consideration of whether a business jet movement cap should be introduced with the reform.

Managing aircraft noise in the longer term

The regulatory constraints at Sydney Airport are relatively inflexible compared with measures at some overseas airports that are designed to reduce noise. Over the longer term, there would be merit in the Australian Government, along with Sydney Airport, considering reform options that improve operational efficiency at Sydney Airport while also introducing incentives for airlines and airports to reduce noise. Some airports and governments around the world have imposed noise-based charges or noise limits (box 7.11). Given the potential cost to the community, any policy change of this scale should only be done with an

independent public inquiry that examines the implications for the community and involves consultation with interested parties. Consideration of any new noise management measures should also be informed by analysis of the way Sydney’s residents value noise and its different aspects.

Box 7.11 International examples of noise management

Many European airports, including airports in France, Germany, Switzerland, Spain and the United Kingdom, incentivise airlines to use quieter aircraft with noise charges. Evidence suggests that airlines use quieter aircraft on routes with larger noise charges but do not base fleet renewal decisions on these charges.

Frankfurt Airport

Frankfurt Airport’s landing and take off charges are based on aircraft noise and the time at which the movement occurs. Frankfurt Airport uses noise data from local monitoring stations to help place aircraft within a noise category. Airlines that increase passenger traffic using quieter aircraft are eligible for a discount of up to 10 per cent on the noise charge.

This system aligns charges to the actual noise effect at the airport. It also incentivises airlines to perform movements at times that are more acceptable to the public. These charges have contributed to noise per passenger decreasing steadily at the airport between 2003 and 2013.

Heathrow Airport

Heathrow Airport charges airlines based on an aircraft’s noise certification and time of landing. The charges are high for aircraft in the noisiest category and are much lower for the other categories. Charges are 2.5 times higher for arrivals during the most sensitive night hours. Noise charges are about 24 per cent of Heathrow Airport’s total aeronautical charges. Between January and May 2018, 62 per cent of aircraft that flew into Heathrow met the strictest noise certification.

Heathrow Airport also has a noise limit that differs by time of day. Any aircraft that emits noise above this limit is fined. Further, a ‘quota count’ system caps the amount of noise the airport can make at night. Heathrow Airport also limits movements between 11.30 pm and 6 am, to 5800 a year, and has a voluntary ban that prevents landings before 4.30 am.

Sources: Alonso et. al. (2017); Butcher (2017); CAA (2017); Fraport (2019); Heathrow Airport (2019).

The numbers of aircraft movements allowed under the movement cap during non-curfew hours, and for freight aircraft during curfew hours, are likely to continue to be contentious in the longer term. The Australian Government should engage in community consultation if it wishes to revise these aspects of the regulatory arrangements.

The Australian Government intends for Western Sydney Airport to operate without a curfew — an intention the Commission supports. The nearest built-up suburban areas will be over 10 km from the Western Sydney Airport runway, compared with less than 1 km at Sydney Airport (DITCRD 2018, p. 2). Government planning and development activities should promote the efficient operation of the airport and ensure that the surrounding land is not developed in a way that ultimately creates pressure to reduce the airport’s 24-hour operations.

7.5 The slot management scheme

The Sydney Airport Slot Management Scheme 2013 sets out guidelines for the allocation of aircraft movement slots at Sydney Airport. The scheme is based on the Worldwide Slot Guidelines (WSG), which are currently under review. The WSG are used in some form to allocate slots at over 200 airports globally (box 7.2).

The slot management scheme can restrict competition

The legislated slot management scheme at Sydney Airport can limit competition. The historical precedence provisions of the WSG have been criticised for hindering competition at slot-coordinated airports, especially as capacity has become more constrained over time (IATA 2018a). These provisions can provide certainty to existing airlines and their customers, but also prevent new entrants from gaining access to an airport (as described in section 7.3) and could be exploited by incumbents to limit competition between airlines. Sydney Airport noted:

Slots are relatively easy for airlines to acquire and there is a low threshold for airlines to retain them in perpetuity. However, slots can be extremely valuable to airlines either because they block competitors from operating services or, where slot trading exists, they can be traded to achieve significant windfall gains. (sub. 53, pp. 107–108)

Sydney Airport voiced concerns that the high value of slots and lack of penalty for misuse could incentivise slot hoarding (sub. 53). It noted that slot hoarding could occur when airlines apply for more slots than they need in order to gain historical precedence and prevent other airlines from using those slots in subsequent seasons. It also pointed out that domestic airlines have shifted to higher frequency services that use smaller aircraft over the past 15 years, which has increased the proportion of slots held by dominant airlines. Further, Sydney Airport stated that airlines seem to be strategically cancelling flights on some routes (sub. DR181). Sydney Airport acknowledged that slot hoarding is difficult to prove because legitimate changes in an airline's plans could be misinterpreted as slot misuse. For instance, down gauging can be a way for airlines to offer more frequent services to the benefit of passengers.

Airlines support the current system

Airline participants stated that slot management schemes are the best solution to demand management problems. Airlines stressed that the WSG are a fair, transparent, equitable and efficient way to allocate the available capacity at the busiest airports (Qantas Group, sub. DR115; Rex, sub. DR108). Further, airline groups noted that a significant benefit of the current scheme is its consistency with global slot allocation processes (IATA, sub. DR116; Qantas Group, sub. DR115; Virgin Australia Group, sub. DR142).

Slot management is also a valuable part of strategic air traffic flow management because it allows existing infrastructure to be used more efficiently in the short to medium term. This

is particularly true if scheduled slots are well matched to the actual aircraft movements allocated by air traffic controllers on the day (Zografos, Madas and Androutsopoulos 2017).

A review of slot management at Australian airports

Historical precedence provisions that restrict competition can have negative effects on airfares and broader operational efficiency at Sydney Airport, to the detriment of passengers in the long run.

The International Air Transport Association is currently reviewing the WSG in response to global criticism and is expected to report at the end of 2019. The review is considering, among other issues:

- slot performance monitoring to ensure that slots are being used correctly
- encouraging access for new entrants
- whether historic determination meets the demands of an increasingly dynamic industry while also accounting for an airline's need for certainty (IATA 2018a).

The Australian Government should commission a public review of Sydney Airport's slot management scheme to assess possible reforms to the current arrangements following the outcomes of the WSG review. The Australian Government's review should also consider the competitiveness of freight aircraft movement allocations during Sydney Airport's curfew period and whether slot management rules should be applied. For example, Virgin Australia Group considered that freight aircraft movements during the curfew should be subject to the 'use it or lose it' test (sub. DR142).

Investigating the need to implement or revise slot management at other major Australian airports would also be beneficial. Rex commented that local slot rules, such as those in place at Brisbane Airport, are not fair or equitable for regional aircraft (sub. 63). Rex also noted that domestic movements at Melbourne Airport could benefit from slot management:

... Melbourne Airport refuses to introduce the runway demand management scheme, for arguments which we find failing. And as a result, the congestion at Melbourne Airport is severe, and we have our worst on-time performance – in departure, I should say, in Melbourne because of that, and it's getting worse every day. (trans., p. 334)

Rex went on to say that the lack of a runway management scheme could significantly reduce Melbourne Airport's on-time performance in the short term. Indicators of on-time performance at Melbourne Airport suggest that it has declined in recent years (chapter 5).

The review should aim to benefit passengers and the broader community

The proposed Australian Government review of Sydney Airport's slot management scheme should seek to achieve a system that delivers better outcomes for passengers, and the broader community, by enabling a wider variety of routes or lower airfares. In particular, the review should aim to:

- increase competition — currently, historical precedence can preclude market entry and airline competition at capacity constrained airports, as described above
- increase slot mobility — slots cannot be formally traded and, as a consequence, may not move to their highest value use
- decrease strategic behaviour — the rules may encourage airlines to apply for slots in excess of their needs and then systematically cancel flights or operate services at a lower gauge. This behaviour can prevent reallocation of slots to competitors and allow airlines to hoard slots for future use
- maintain equity — changing the scheme could, unfairly, reduce some airlines' access to slots. For example, introducing slot prices could prevent entry of smaller, low-cost competitors.

The review should consider whether changing or tightening existing rules could achieve the above aims. For example, the review could explore whether there is merit in:

- enhanced performance monitoring to better identify misused slots
- a strengthened 'use it or lose it' rule that increases the percentage of slots that must be used or punishes airlines for misusing slots (Steer 2011; Sydney Airport, sub. DR112)
- an improved new entrant rule to increase the chance a new entrant is allocated slots
- increased use of the 'size of aircraft' test.

The review could also consider slot recycling, which would require airlines to return a proportion of their slot portfolio to the slot pool regularly (Madas and Zografos 2010). Slot recycling would reduce scheduling certainty for airlines but could establish a minimum size for the slot pool and encourage competition through greater slot availability.

There would also be merit in the review considering reform options that attach a price to slots and encourage slots to be transferred to airlines that value them most. These options, such as slot auctions, secondary trading and congestion pricing, could reduce slot hoarding and strategic behaviour because airlines would have to pay for the slot, instead of being awarded it freely. They could also generate efficiency benefits. For example, slot auctions and secondary slot markets can promote new airline entry (Le, Donohue and Chen 2004; Steer 2011) and make it easier to achieve efficiency over time. Congestion pricing can encourage airlines to move flights into less congested times.

While these reforms incentivise slot mobility, they also have the potential to price out smaller airlines and affect equity of access to the airport. For example, auctions may lead to high prices that larger airlines would be more able to pay (IATA 2018a). Secondary markets could lead to airlines selling slots that they would otherwise return to the slot pool. Any review should consider the benefits of such reforms against their costs.

Analysis of these alternatives could draw on international experience. For example, airports in China experimented with slot auctions (Routes 2016), the United States attempted to implement slot auctions in 2008 (but this was later ruled outside of the Federal Aviation Administration's authority (GAO 2008)), and secondary trading has seen mixed results across airports in Europe (Steer 2011).

RECOMMENDATION 7.5 REVIEWING SLOT MANAGEMENT AT AUSTRALIAN AIRPORTS

The Australian Government should commission a public review of the Sydney Airport Slot Management Scheme 2013 (Cwlth) following the completion of the International Air Transport Association's review into the Worldwide Slot Guidelines (WSG), expected at the end of 2019.

The public review should assess how effectively the Scheme contributes to the efficient use of airport infrastructure, taking into account regional access and noise management objectives. The review should consider reform options in relation to:

- whether slot allocation arrangements generate the greatest net benefits to the community or if alternatives that are not based on historical precedence would improve outcomes for passengers
- the outcomes of the WSG review and any WSG provisions that are not currently part of the Scheme
- the costs and benefits of continued alignment with the latest WSG, including the effects on competition between airlines.

The review should also investigate the need to implement or revise slot management at other major Australian airports.

8 Competition in markets for jet fuel

Key points

- Jet fuel is the largest single source of global airline operating costs, at about 20 per cent in 2017-18.
 - A one cent per litre fall in the price of jet fuel could result in a \$90 million reduction in operating costs for airlines refuelling in Australia.
 - The price of oil, and refinery and transportation costs, are the principal components of jet fuel prices. Depending on the level of competition through the supply chain, jet fuel prices can also include a margin reflecting monopoly pricing.
- The Commission has focused its competition analysis for jet fuel on the characteristics of markets to supply jet fuel, supported by information provided in hearings and confidential and public submissions, to reach its conclusions and recommendations.
- The markets to supply jet fuel at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) involve a small number of vertically integrated suppliers and high barriers to entry.
 - This is a cause for concern and has likely lead to higher access prices for infrastructure services and higher jet fuel prices.
- Any change to the regulatory environment at this time may not generate net benefits for the community. The risks associated with industry-specific access regulation could be considerable, given the potential effect on investment incentives.
 - The National Access Regime remains an effective tool for gaining access to certain infrastructure services if commercial negotiations fail.
- Conditions for competition are improving, with some airports and fuel suppliers agreeing on lease arrangements for on-airport infrastructure that include access for third party fuel suppliers. This removes a hurdle to accessing joint user hydrant installation (JUHI) infrastructure but does not improve access to upstream infrastructure.
- Uncertainty from JUHI lease renegotiations, at times, has led to underinvestment in both on- and off-airport infrastructure at some monitored airports. Airports and fuel suppliers can address uncertainty through lease terms agreed in the commercial negotiation process.
- The JUHI infrastructure at Western Sydney Airport should operate on an open access basis to allow for more competition in the market to supply jet fuel. This should be a condition of any future privatisation.
- Introducing jet fuel infrastructure planning groups at the monitored airports as part of the master planning process would improve planning and consultation for future infrastructure investment.
- A small number of airports charge fuel throughput levies, which can be justified if they are agreed to during lease negotiations as part of an efficient pricing regime. The Commission has not seen evidence of airports introducing fuel throughput levies outside of a lease agreement.

A secure and competitive supply of jet fuel is critical for the functioning of the aviation industry. Jet fuel accounted for the largest single source of global airline operating costs, at about 20 per cent in 2017-18, although this can vary by airline. For example, Regional Express’ (Rex’s) jet fuel costs accounted for about 16 per cent of its operating costs in 2017-18. In the same year, the demand for jet fuel in Australia was 9000 megalitres, which cost airlines between \$7–9 billion (IATA, sub. 27). This means a one cent per litre decrease in the price of jet fuel could result in a \$90 million reduction in operating costs for airlines refuelling in Australia.

The consumption of jet fuel has increased over time due to the growth in international and domestic air travel (chapter 1). This growth in consumption has been partially offset by the increasing use of more fuel-efficient aircraft and more efficient flight paths, such as continuous climb and descent operations, which burn less fuel than frequent levelling off. Better weather sensing technology and flight planning has also cut down on fuel use.

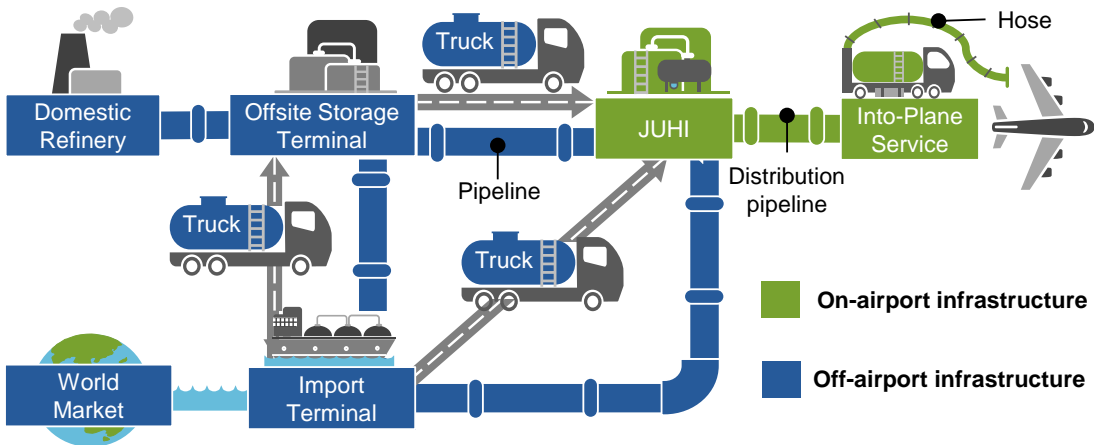
The terms of reference request the Commission to review competition in markets to supply jet fuel in Australia. The Commission has drawn on the analytical framework outlined in chapter 3 to assess whether fuel suppliers and airport operators have market power in markets to supply jet fuel at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports), where the majority of fuel is uplifted (DOEE 2018).

8.1 The markets to supply jet fuel

The jet fuel supply chain

The markets to supply jet fuel comprise complex chains of infrastructure services to transport jet fuel from its origin, as refined crude oil in international or domestic refineries, to the wingtip at Australian airports (figure 8.1).

Figure 8.1 Jet fuel market structure

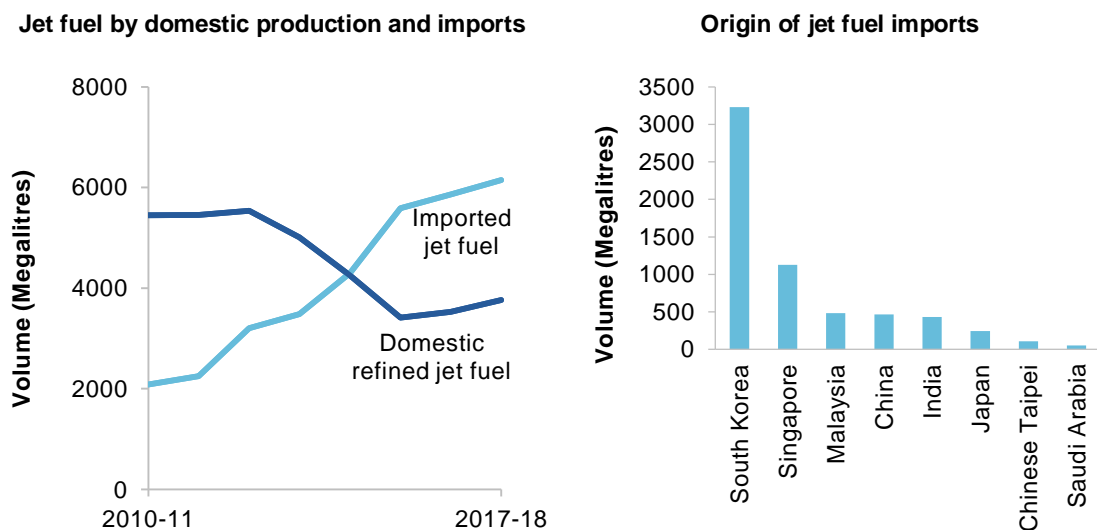


Sources of jet fuel

The jet fuel used in the Australian aviation sector is sourced from a number of domestic and international locations. Four domestic refineries, which source crude oil from world markets or from oil wells in Australia, supply about 40 per cent of jet fuel uplifted in Australia (figure 8.2). These are the Mobil Oil Australia (Mobil) Altona and Viva Energy Australia (Viva) Geelong refineries in Melbourne, the BP Australia (BP) Kwinana refinery in Perth and the Caltex Australia (Caltex) Lytton refinery in Brisbane. Even with recent upgrades to existing refinery capacity, such as additional storage and production capacity at Mobil Altona, the volume of jet fuel produced domestically has declined in recent years. This has been due to the closure of a number of Australian refineries — the Shell operated Clyde refinery in 2012, the Caltex operated Kurnell refinery in 2014 and the BP operated Bulwer Island refinery in 2015. These refineries faced aging infrastructure, high operating costs and a smaller scale by international standards, which meant they were unable to capture the benefits of economies of scale.

The remaining 60 per cent of Australia’s jet fuel supply is imported. Of the imported fuel, 53 per cent is sourced from large refineries in South Korea (figure 8.2). The cost of shipping jet fuel to Australia is high compared with the cost of shipping to many other countries (discussed further below) due to Australia’s relative isolation from international fuel sources and the lack of an exported return product. Even with high shipping costs, the share of imported jet fuel is likely to grow, as fuel produced by larger, more cost-efficient refineries in Asia replaces jet fuel produced by the older and less cost-efficient Australian refineries.

Figure 8.2 Jet fuel imports by supply source and origin



Source: DOEE (2018).

Downstream infrastructure and fuel purchase

A chain of infrastructure services transports locally refined and imported jet fuel to the aircraft wingtip. This infrastructure includes import terminals, off-airport storage tanks and terminals, pipelines and trucks, on-airport storage and hydrants and into-plane distribution systems. The arrangements for the ownership and management of the infrastructure vary along the supply chain and from airport to airport. The four major fuel suppliers in Australia are BP, Caltex, Mobil and Viva (Viva Energy was formerly part of the Royal Dutch Shell group, with the Australian business acquired in 2014 by new owners led by the Vitol Group). These incumbent suppliers are involved throughout the supply chain, either as sole providers or as partners in a joint venture.

Imported jet fuel arrives at the port and is unloaded from the ship to storage facilities at the import terminal. Pipelines and trucks then transport the fuel from the terminal to the airport. The vast majority of jet fuel supplied to the four monitored airports is transported from the terminal or refinery by pipeline — 97 per cent at Sydney Airport, 77 per cent at Melbourne and 100 per cent at Brisbane and Perth (BP, sub. 47) — with the remaining share transported by road. Often the pipeline directly connects the terminal to the airport but, in some cases, pipelines may connect from the terminal to other off-airport storage facilities.

Infrastructure at the airport consists of large storage facilities for jet fuel, used to test, settle and store the fuel, and underground distribution pipelines and hydrants. These facilities are the joint user hydrant installation (JUHI) infrastructure that supply fuel to the airport apron. Most airports have some form of fuel infrastructure, regardless of airport size, although the ownership arrangements and scale can differ. At some airports, such as Adelaide Airport, the ownership of the hydrant system is separate from the storage facilities — which in this case is known as a joint operated storage facility (JOSF) — and at other airports there may only be storage facilities and no hydrant system. Joint ventures of some or all of the four major fuel suppliers — and Qantas Group (Qantas, QantasLink and Jetstar) at Sydney Airport — own the JUHI infrastructure at the monitored airports. A member of the JUHI joint venture manages the infrastructure on a rotational basis. The JUHI joint ventures lease land from airport operators and pay a licence fee for underground pipelines, generally for a period of up to 20 years.

The final step of the supply chain is refilling the plane in preparation for its departure — a service delivered by into-plane providers. Refuelling trucks connect into the distribution system via hydrants under the apron and pump fuel into the wingtip. The four major fuel suppliers generally own the into-plane providers, typically through a joint venture or individually (BP, sub. 47).

Airlines are able to purchase fuel without involvement in the supply chain (although Qantas Group is a member of the Sydney JUHI joint venture). Airlines normally purchase jet fuel at the wingtip and seek tenders for supply at an airport or region on an into-wing basis. Fuel suppliers bid for contracts by offering a price per unit of fuel delivered into-wing and a percentage supply of the total volume demanded by the airline. A negotiation process

follows the first round of bids between the airline and fuel suppliers to ensure the airline contracts the total volume of fuel required (BP, sub. 47).

Characteristics of the markets to supply jet fuel

The supply chain for jet fuel is characterised by three features that have the potential to influence its efficiency: the infrastructure has natural monopoly characteristics, suppliers are vertically integrated and joint ventures provide some infrastructure services.

Natural monopoly infrastructure

A natural monopoly is a market characteristic in which one infrastructure provider can service existing and foreseeable customer demand at a lower cost than multiple providers duplicating infrastructure (chapter 2). Natural monopoly characteristics are common in infrastructure assets that have high fixed costs relative to operating costs, such that the average cost of production declines with output.

Several parts of the supply chain for jet fuel exhibit these characteristics. Jet fuel pipelines involve large upfront investments, including for planning, land acquisition and construction. The average cost of production declines as the size of the pipeline increases and the quantity of fuel transported increases (termed economies of scale), up to the point where the pipeline reaches capacity. Storage facilities on- and off-airport and import terminals exhibit similar characteristics, including large upfront and sunk investments and economies of scale. In addition, terminal and storage facilities have economies of scope, as the cost of providing related services together, such as storing, testing and settling the fuel and connecting to the hydrants, is cheaper than providing them separately.

These characteristics mean that it may be more efficient for one supplier to provide a service. However, natural monopoly infrastructure can also lead to an enduring lack of effective competition and to a firm having market power. A jet fuel supplier that is able to exercise market power may set prices above the long-run average cost, the conceptual benchmark for efficient pricing. It may also underinvest in infrastructure or deny access to new entrants (chapter 2).

Vertical integration

Four large suppliers dominate the supply chain for jet fuel in Australia, from the importation and refining of crude oil to the delivery of the refined product into the plane. Vertical integration — which involves the same firm engaged in different stages of production — can produce efficiency benefits when it enables a firm to capture economies of scope and scale, as outlined above, and take advantage of enhanced coordination of production activities.

Vertical integration can also pose a risk to competition where there is a lack of competition in one part of the supply chain (for example, due to a natural monopoly at that stage of production). A vertically integrated business seeks to maximise profits across all its services and may have an incentive to behave in a way that restricts competition in the upstream and downstream markets in which it operates. For example, a jet fuel supplier may be able to use its dominance to restrict competition by denying access to, or charging monopoly prices in, one or more parts of the supply chain, such as the pipeline or JUHI infrastructure. Even the existence of a vertically integrated monopoly may be sufficient to deter entry or limit vigorous competition in a dependent market (Hilmer Committee 1993).

Joint ventures

Joint ventures are a business structure formed by two or more parties entering into an agreement to provide a service together. Unincorporated joint ventures are not required to register with the Australian Securities and Investments Commission, although they may choose to seek authorisation from the Australian Competition and Consumer Commission (ACCC) for an exemption from prohibitions under Part IV of the *Competition and Consumer Act 2010* (Cwlth) (CCA).

Joint ventures can have a net benefit to the community when they provide a product or service more efficiently than if that product or service were provided by several separate firms. Joint venture members owning a shared infrastructure facility may result in efficiency gains from economies of scope and scale. There could be high duplication costs and potentially increased coordination costs if each provider were to operate separate facilities to supply jet fuel.

Gains in efficiency from a joint venture are tempered by potential losses in competition. These losses may occur when the providers of a service would otherwise be in strong competition. A joint venture agreement aligns the economic interests of the member firms leading to potential anticompetitive behaviour, such as denying access to infrastructure services so that members can share monopoly profits. Terms of a joint venture agreement may facilitate anticompetitive behaviour by restricting investments that do not have the approval of all members, rather than enabling each member to pursue its own objectives. For example, if a member would like to invest to expand infrastructure and increase supply — which would decrease jet fuel prices — they could be constrained by the requirement to receive approval from all joint venture members. This condition enforces the status quo and limits competition between joint venture members.

8.2 The current regulatory regime

The supply chain for jet fuel is not subject to specific economic regulation, but rather comes under the general competition and market power protections of the CCA, including the National Access Regime under Part IIIA of the CCA (chapter 1).

An objective of the National Access Regime is to promote the efficient use of and investment in infrastructure, thereby promoting effective competition in upstream and downstream markets. It provides the potential for regulatory declaration of certain infrastructure services in cases where a firm has been unable to negotiate access on reasonable terms. A party wishing to gain access to infrastructure services under these circumstances can apply to the National Competition Council (NCC) to have services declared by the Minister. Declaration is determined on a case-by-case basis that involves applying the declaration criteria (among other things) to the infrastructure service. The National Access Regime is a backstop for parties to seek third party access to infrastructure services.

In 2011, the Board of Airline Representatives of Australia (BARA) made an application to the NCC under the National Access Regime for declaration of the Sydney JUHI and the Caltex pipeline from Port Botany to the Sydney JUHI. The NCC recommended the Minister reject both applications on the basis that two criterion could not be satisfied.

- Criterion (a) — declaration of either the pipeline or JUHI, or both, would not result in a material increase in competition in into-plane services or the supply of jet fuel at Sydney Airport. The NCC was not satisfied that declaring either asset would increase competition, as capacity constraints would prohibit new suppliers from securing capacity.
- Criterion (f) — the NCC was not satisfied that declaration was not against the public interest. It stated that regulating access through the National Access Regime could delay investment in new capacity.

The Australian Government made a number of changes to the CCA in 2017, including revisions to the National Access Regime declaration criteria, following the Harper Review and the Commission's 2013 inquiry into the National Access Regime. The NCC is currently considering whether it should recommend to the Minister that the declaration of services at the Port of Newcastle be revoked. The Council released its preliminary views in December 2018 and its final recommendations are expected in June 2019. This will be the NCC's first recommendation since the 2017 changes to the National Access Regime (NCC, sub. 79).

The supply chain for jet fuel is also subject to misuse of market power regulation under section 46, Part IV of the CCA. Section 46 concerns companies that have substantial market power and act in a way that reduces competition by, for example, eliminating competitors, preventing entry into a market and deterring or preventing competitive conduct in a market.

In addition to this economic regulation, jet fuel suppliers face environmental regulations such as the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) and State and Territory planning and environment legislation.

The jet fuel industry has implemented policies to reduce the risk of anticompetitive information sharing by preventing the exchange of any commercial information that could breach competition laws. It has done this through internal barriers both within fuel suppliers and between members in the joint ventures. These policies were adopted from a global standard set by the Joint Inspection Group (JIG) (box 8.1).

The industry also has strict fuel quality standards to ensure that jet fuel meets the quality required for aviation. Fuel undergoes testing at several points along the supply chain in order to identify instances of contamination that can result in supply disruptions. For example, in November 2016, a jet fuel shipment failed quality control tests, which led to supply disruption and rationing at Melbourne Airport (DIRDC, sub. 40).

Box 8.1 Joint Inspection Group core principles

The principles for internal information barriers are set out in the joint user hydrant installation joint venture agreements between the infrastructure owners and comply with standards set by the Joint Inspection Group. The principles include:

- joint venture managers and representatives cannot participate in fuel marketing activities
- joint venture managers can only share information which is strictly necessary for the operation of the joint venture
- restrictions preventing employees who have worked as an operator from moving to the sales team for 12 months
- confidentiality agreements between the joint venture operator and the participants.

Sources: AIP (sub. DR123); Caltex (sub. DR167).

8.3 Third party access to infrastructure services

Third party access to jet fuel infrastructure along the supply chain is a critical determinant of competition in markets to supply jet fuel. Arrangements differ depending on the airport, the type of infrastructure and its ownership structure. These can involve:

- open access — any third party can access the infrastructure by paying an access fee
- restricted access — third parties can gain access to the infrastructure by purchasing equity
- closed access — third parties are unable to gain access to the infrastructure.

Import terminals

A number of the Australian markets for jet fuel, including Sydney, Melbourne and Brisbane, have more than one import terminal and storage facility.

- There are currently three import terminals in Sydney: the Viva Clyde import terminal, the Caltex Kurnell import terminal and the Vopak terminal.
- There are three import terminals in Melbourne, one terminal solely owned by Viva, a second owned by Caltex, and the third is a joint venture between Mobil and BP.
- There are three import terminals in Brisbane, one owned by Viva, a second owned by BP, and the third owned by Caltex, which is located at the Lytton refinery.

While there may be more than one import terminal in some markets, access for new entrants depends on whether a terminal is open or closed access (the Commission is not aware of any restricted access import terminals). Most of the import terminals outlined above are closed access. The exceptions to this are the Vopak terminal in Sydney, and the Mobil and BP Yarraville joint venture terminal in Melbourne, which are open access. Access to the Vopak terminal has enabled Kuwait Petroleum Aviation (Australia) (Q8) to gain access to the supply chain for jet fuel at Sydney and supply fuel at Sydney Airport to Qantas Group (Qantas 2011).

An alternative to accessing an existing terminal is for a potential entrant to develop its own facilities. However, as discussed above, the investment required to build a terminal facility is large and lumpy. This means that in the short term while there is spare capacity in terminal storage (as is currently the case in Melbourne), an entrant would be less likely to recover its costs on a new facility. As noted by BP:

There are potential barriers for prospective new jet fuel import suppliers from establishing their own terminal facilities. A new entrant in product terminaling is faced with the prospect of high capital costs. (sub. 47, p. 43)

The high costs of developing import terminal facilities mean that it is unlikely a new entrant would be able to supply fuel to an airport without obtaining access to a competitor's terminal or by using an open access terminal facility. Further, a new entrant would be unlikely to build a new terminal unless it is able to access infrastructure further down the supply chain, discussed below.

Pipelines

The majority of jet fuel supply in Australia is transported from the import terminal to the monitored airports by pipeline.

- Two pipelines supply the Sydney JUHI: the Caltex pipeline and the Viva Clyde pipeline.
- The Tullamarine pipeline, owned by a joint venture between BP, Mobil and Viva, supplies fuel to Melbourne Airport.
- Two pipelines supply fuel to Brisbane Airport: one is a joint venture between Caltex and Viva, and BP solely owns the other.
- One pipeline owned by BP supplies fuel from the BP Kwinana refinery to Perth Airport.

As with terminal facilities, gaining access to pipelines can be a barrier to access for fuel suppliers looking to break into a market. The Commission is aware of only one pipeline to the monitored airports — the Caltex pipeline in Sydney — that allows access for third parties.

The Commission understands the Caltex open access pipeline has enabled Qantas Group to self-supply by purchasing fuel from Q8 at the Vopak terminal and transporting it through the pipeline to Sydney Airport (Caltex 2011). This has provided some competition to the

incumbent fuel suppliers. Caltex advised the Commission that it seeks tenders for access to its pipeline for five days of supply a month:

Probably now coming up to 15 years, we contracted with other parties for access to our pipeline. They've been structured a number of different ways over that time. At the moment, we periodically run a tender for access to our pipeline in Sydney ... (Caltex, trans., p. 148)

The sole pipeline supplying jet fuel to Melbourne Airport (Tullamarine pipeline) does not offer access to third parties. The Commission does not have information on the access terms for the pipelines to Brisbane and Perth airports.

An alternative to accessing an existing pipeline would be for a new entrant to build its own. In the past, Caltex has commented:

It would likely be economically feasible for Vopak, another fuel supplier storing jet fuel in the Vopak Terminal, or an airline or consortium of airlines to construct a new Vopak–Airport pipeline. (2011, p. 62)

As discussed above, the natural monopoly characteristics of pipelines are likely to deter potential entrants from duplicating infrastructure, at least until the current pipelines reach capacity or until the costs of fuel under monopoly pricing or access denial are greater than the costs associated with building a new pipeline. There may be the case for a fuel supplier (either an incumbent or entrant) to build new pipeline infrastructure in Sydney and Melbourne as existing pipelines reach capacity (as will soon be the case for the Tullamarine pipeline). Northern Territory Airports noted that large throughput volumes — in the order of 700 to 1000 megalitres a year — are required for pipelines to be viable (Northern Territory Airports, trans., p. 83). If duplication of infrastructure leads to a substitute service, this may provide facilities-based competition that could constrain the ability of the incumbent fuel suppliers to charge monopoly prices or deny access to third parties.

Is trucking a substitute for a pipeline?

Although pipelines are the main means for transporting jet fuel to the monitored airports, many other Australian airports are reliant on trucks to transport fuel to on- or off-airport storage. A number of participants have commented that trucking fuel is a viable alternative to transporting small quantities of fuel via pipeline. The availability of a substitute can lower market power, as discussed in chapter 3. Caltex noted:

... trucking is a very efficient way of moving transport fuels, even jet fuel. Smaller airports tend to be exclusively truck fed. So airports at places like that would be Cairns, Townsville, Gold Coast, Canberra. ... Major airports, I think Brisbane, Sydney, Melbourne, Perth, tend to be pipeline fed. Some of those larger airport[s] have both pipeline and truck. Some airports have multiple pipelines. I think the high capital intensity of pipelines tends to mean that you need large volume flows to make that efficient, and to be cost competitive with trucking. (trans., p. 149)

Unlike pipelines, fuel supplied by truck does not have declining average costs — the costs of trucking fuel increase in proportion to the quantity supplied. Additionally, beyond a point

there can be negative effects through congestion and environmental costs. Bioenergy Australia commented to the Commission that a new jet fuel supplier would not be financially viable if it had no choice other than to truck fuel (trans., p. 43). Other participants, such as Melbourne Airport, acknowledged the benefits of pipelines but noted that some suppliers are still able to truck fuel profitably, largely due to congestion in the pipeline.

In terms of the economics, transporting jet fuel by pipeline is superior to trucking. The costs are higher. Despite that, we've still got suppliers that are more than happy to truck fuel and are able to make a profit. (Melbourne Airport, trans., p. 59)

Trucking fuel may become less viable when a new pipeline is operational in Melbourne, as the capacity of the new and existing pipelines would likely cover the demand for fuel at Melbourne Airport.

As noted above, trucking fuel can also produce costs associated with congestion, particularly if the number of trips increases during peak traffic (for example, it takes six B-double fuel tankers to fill an Airbus A380). In 2010, the Sydney Jet Fuel Working Group observed that:

Trucking significantly increases traffic congestion around the immediate JUHI area. It also increases safety risks at JUHI. Trucking is not a total solution to the bottleneck in transporting fuel from off-airport storage facilities to Sydney Airport, but can provide incremental supply in the short to medium term or under special or emergency supply conditions. (2010, p. 25)

Further, the Commission heard that trucking creates environmental and safety hazards. For example Northern Territory Airports suggested that '... there are some real economic, environmental, and safety advantages of delivering the fuel by pipeline compared to road transport' (trans., p. 74).

Pipelines can provide a significant competitive advantage compared with trucking where there is sufficient demand, given they can transport much larger volumes of jet fuel at a lower average cost. Trucking is clearly viable for small airports and may provide short-term supply for the monitored airports as pipelines approach capacity. However, trucking is unlikely to be a viable substitute to a pipeline in the long term. Increasing costs and the potential for significant costs associated with increased road congestion and environmental and safety concerns mean that trucking large volumes of fuel is not efficient at larger airports.

Joint user hydrant installation infrastructure

The only way to supply fuel to a plane at monitored airports is through that airport's JUHI infrastructure. The current ownership of the JUHI infrastructure at the monitored airports is by unincorporated joint venture between some or all of the four major fuel suppliers (and Qantas Group at Sydney Airport). These agreements were formed about 50 years ago after the Australian Government decided it would be more efficient for one facility to provide storage and hydrant services rather than several duplicated facilities (Sydney JUHI 2011). The Australian JUHI arrangements differ to those at a number of overseas airports (box 8.2).

Restricted access

The majority of the JUHI joint ventures in Australia are characterised by restricted access — the only way a new entrant can supply jet fuel is by purchasing equity in the joint venture or by arranging fuel supply through a JUHI member. For example, Q8 supplies fuel at Sydney Airport to Qantas Group who is a member of the JUHI (Caltex 2011). As BP commented:

In relation to the Sydney JUHI, under the terms of the joint venture (JV) agreement between the owners, any third party can gain access to the services provided using the JUHI facilities on the same terms and conditions as the existing JV participants so long as they meet certain entry requirements set out in the agreement. (sub. 47, p. 7)

The Commission understands that several third parties have applied for equity access at a number of JUHIs over the past decade, but none has proceeded to purchase equity in a JUHI joint venture. For example, the Sydney JUHI joint venture provided evidence of five separate applications, where three of the applicants cited a lack of time remaining on the JUHI lease as a reason for not proceeding to purchase a share.

Some participants, including airlines and airports, have stated that potential suppliers have not been able to gain equity access to the JUHI due to the restricted access arrangements. Perth Airport commented:

I think for us, one of the barriers of entry for new operators into the JUHI has been the equity type model that the JUHI has operated under, whereby new operators are required to buy in to the asset ... (trans., p. 121)

BARA highlighted that an equity access arrangement creates risks for new fuel suppliers (trans., p. 14). It noted that the risks could prevent a new entrant from testing and growing a market, especially when combined with uncertainty around the tenure of the lease between the airport and the JUHI.

Some participants told the Commission that an overpriced equity buy-in for JUHI infrastructure could deter new entrants. An overpriced asset would mean that the expected cash flows received from ownership of the infrastructure would not provide an adequate return for the price of entry. JUHI infrastructure owners are likely to have the incentive and the ability to overprice the JUHI infrastructure to deter entrants from supplying jet fuel.

BP (sub. 47) submitted that equity access is the only way to ensure there are incentives to invest in infrastructure and that it can lower transaction costs for airports and infrastructure providers. The Commission recognises that access requirements should provide sufficient incentives for owners of jet fuel infrastructure to invest. However, the Commission notes that equity access is not required for other, somewhat similar, infrastructure services, such as gas pipelines.

Box 8.2 On-airport jet fuel infrastructure: international examples

Hong Kong Airport

The fuel farm and hydrant system at Hong Kong International Airport are open access for qualified suppliers. The airport owns the facilities and charges a common transparent throughput fee for users (BARA, sub. 37; IATA, sub. 27).

Parties in a joint venture comprising US and European oil companies, Hong Kong-based air carriers, mainland Chinese fuel suppliers and aviation organisations developed the facilities. This joint venture designed, financed, built and operated the facilities, before transferring ownership to the Airport Authority Hong Kong (the joint venture still operates the facilities).

Los Angeles Airport

Fuel is supplied at Los Angeles Airport through a consortium of airlines with distribution contracted to a third party operator. This arrangement has been in place since 1985 when a consortium of airlines purchased the facilities on the airport, leased the property from the airport authority, financed improvements and managed the fuel infrastructure and operations (Smith and Sturtz 2010). Airlines that are not members of the consortium are able to access the facilities, but at a higher price (Sapere Research Group 2011). BP noted:

Member airlines are charged a fee based on fuel volume and cost of operations. The fee charged to member airlines is adjusted at the end of the year to reflect the actual cost of operations. Non-member airline users are charged a fee based on fuel volume and are also charged for usage of certain off-airport storage and pipeline facilities. (sub. 47, p. 24)

Vancouver Airport

The Vancouver Airport Fuel Facilities Corporation is a not-for-profit company owned by a consortium of 25 commercial airlines representing most of the domestic and international carriers operating at Vancouver International Airport. The Corporation owns and operates fuel storage and distribution facilities at the airport, with the facilities shared among the airlines, allowing them to avoid duplication and minimise costs. Similar fuel facility corporations operate at all of the major international airports across Canada (VAFFC 2018).

EU Airports

A 1996 EU directive opened ground handling services at EU airports to competition. EU Member States may decide to limit the number of suppliers of certain services, such as fuelling and baggage handling. In such cases, the minimum number of suppliers has to be two and at least one of the suppliers has to be independent of the airport or the dominant airline at that airport (Airport Research Centre 2009). The same rules apply if an airline wishes to self-handle ground services. Qantas Group has advocated for this approach in Australia:

To overcome the problems experienced with the fuel companies in the Australian market, Qantas Group recommends consideration of regulatory models similar to those used in the EU. (sub. 46, p. 36)

In 2012, the NCC acknowledged that there are issues with gaining equity access:

In the absence of a clearer ability for parties seeking to join the JUHI JV to enforce the ‘right’ to access under the terms of the JV agreement, the Council maintains that it cannot attach much weight to the ability to join the JV as a means of obtaining access. (NCC 2012, p. 28)

However, it concluded ‘... that the criteria for joining the JUHI JV are not such as to create a barrier to entry’ (NCC 2012, p. 28).

Open access

An alternative to the restricted access model is open access to JUHI infrastructure. Recently, two JUHIs joint ventures — Melbourne and Darwin — have agreed to open access regimes and both airports have indicated they expect this to lead to increased competition. In November 2017, Melbourne Airport signed a new 20-year agreement with the JUHI joint venture that requires the joint venture to provide open access to the JUHI infrastructure (trans., p. 53). The Melbourne JUHI joint venture commented:

Since the fuel facilities were made available for third party access, the Operator has received five inquiries regarding infrastructure services at Melbourne JUHI. One party has proceeded to apply for and has been granted access to infrastructure services. (sub. DR118, p. 2)

Northern Territory Airports is purchasing the existing fuel infrastructure at Darwin Airport from the current owners — Viva and BP — over a period of 12 years. In 2017, Northern Territory Airports purchased 40 per cent of the existing JUHI infrastructure and will purchase an additional 20 per cent every three years (trans., p. 70). Northern Territory Airports noted it:

... has created an open access market for jet fuel supply in Darwin with companies outside the former joint venture members now bidding on fuel supply contracts. There are indications that on a like for like basis the Darwin jet fuel cost has reduced because the market is now contestable. (sub. 8, p. 6)

A number of airports (Perth Airport, trans., pp. 442–443; Adelaide Airport, trans., p. 412) have recently noted they intend to include open access in any new lease agreements. For example, Sydney Airport noted that it ‘... is exploring opportunities to structure future arrangements in a way that supports open access and competition’ (sub. DR112, p. 28).

In theory, these open access arrangements involve lower barriers to entry than closed and restricted access arrangements and may be more effective in facilitating competition between suppliers. The extent to which open access results in new competition depends on the exact terms of access, the procedures for gaining access, and limitations on accessing other necessary infrastructure services, such as pipelines.

Into-plane services

Into-plane services do not have natural monopoly characteristics, unlike import terminals, pipelines and JUHIs. Refuelling trucks are mobile assets that can be sold at the depreciated asset value, therefore any investment made by a potential into-plane provider is unlikely to be a large sunk cost. Relatively low barriers to entry mean that a potential entrant — whether owned by a fuel company or not — could purchase a refuelling truck and, subject to approval by the airport, use it to provide into-plane services.

It is unlikely that a competitor would be willing to enter a market for into-plane services, given the current into-plane services at the monitored airports are provided by the four major (vertically integrated) fuel suppliers. A new into-plane entrant may assume that the incumbent fuel suppliers would be unlikely to switch to a new provider and continue to utilise its own into-plane services. Open access arrangements at the JUHI could change this — potential competitor fuel suppliers may encourage independent into-plane services to enter the markets at the monitored airports.

8.4 Some markets to supply jet fuel are not competitive

The Commission has assessed the extent to which the characteristics of the supply chain for jet fuel, such as vertical integration, barriers to third party access and availability of substitutes, are impeding competitive outcomes in markets to supply jet fuel.

Few suppliers at some airports

High barriers to accessing infrastructure at multiple points in the supply chain have made it difficult for potential jet fuel suppliers to establish a supply chain at some airports. BARA (sub. 37) highlighted to the Commission that only one or two effective suppliers dominate the markets for jet fuel at Sydney, Melbourne and Perth airports (defined as suppliers that can meet the needs of a number of international airlines). As noted by the Australian Airports Association:

The current situation at most major airports is that the off-airport storage facilities are owned by a single supplier, which usually also owns the lease of the fuel hydrant pipeline and on-airport storage facility. (sub. 50, p. 100)

Northern Territory Airports noted there has been a lack of new entrants to the market:

... in the almost 50 years of JUHI experience in Australia, there has been only one new member (Qantas) join at one airport via equity participation. (sub. 8, p. 6)

As noted above, some elements of the supply chain provide open or limited access to jet fuel infrastructure, such as the Vopak terminal in Sydney and the Melbourne JUHI. However, there are several other points at which access can be constrained, limiting the ability of a new entrant to supply jet fuel to an airport.

The ACCC noted that requiring access at multiple points in the supply chain has led to limited competition:

While it may be possible that a new entrant may be able to overcome the challenges associated with [gaining access to] any one of these elements of the supply chain, the need to have appropriate access at all three [terminals, pipelines and JUHIs] makes it very difficult for a company to enter the market. This provides the existing suppliers of jet fuel with significant market power. (sub. 59, pp. 58–59)

The supply chain servicing Melbourne Airport provides one example of the barriers presented to a new provider. While the Melbourne JUHI is now open access, a new entrant may be unable to access an import terminal or pipeline, or supply through an independent into-plane service. Melbourne Airport raised concerns with this in its submission:

Even with the new open access provision in the agreement between Melbourne Airport and the JUHI participants signed in 2017, accessing the other elements of the supply chain is a challenge and reduces competition for Jet-A1 in Melbourne – access to storage at the port, pipeline infrastructure and into-plane services are critical. (sub. 33, p. 146)

Intensity of competition

Some incumbent fuel suppliers, including BP, have suggested to the Commission that, despite their low number, they compete vigorously on contracts and there are low switching costs to airlines changing fuel suppliers:

Jet fuel suppliers compete vigorously in response to supply tenders from airlines and have strong economic incentives to do so. Winning tenders through supplying more jet fuel is the only way for jet fuel suppliers to minimise their operating and production costs. (sub. 47, p. 40)

BP noted that it may not be able bid due to capacity constraints and referenced the NCC's 2012 decision on the BARA application for declaration:

The Council considers that the limited bids are reflective of supply and capacity constraints, more so than a lack of access or abuse of market power by any service provider. (NCC 2012, quoted in sub. DR153, p. 5)

Fuel companies argued that a low number of bids does not necessarily reflect a lack of effective competition. For example, Mobil noted:

Even if there are only a couple of bids, this need not be indicative of a lack of competition. If an airline's existing fuel supplier is supplying that airline at the competitive (i.e. minimum) price, then it is pointless for another supplier to try to win the contract, especially if the airline has a good working relationship with the fuel supplier. (sub. DR139, p. 6)

A profit maximising fuel supplier would have the incentive to bid on all contracts where it has capacity and the returns are expected to be positive, regardless of the market structure. BARA, airlines and the fuel suppliers have all acknowledged that there are a low number bids on tenders to supply fuel.

The Commission heard that, in some cases, international airlines only receive one or two bids on their tenders for fuel supply. IATA provided data on the number of bids for tenders conducted by an airline at the monitored airports (table 8.1). IATA suggested that bids to supply only part of the volume-tendered and bids with very high prices that are included in these data might overstate the level of competition (IATA, sub. DR116). Yet data from IATA (table 8.1) suggest that the number of bids could be more in line with the number of suppliers at each monitored airport (depending on whether suppliers place multiple bids at different prices).

Table 8.1 Bids to supply fuel at each monitored airport

	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Perth</i>
Number of suppliers that bid	3 – 5	2 – 4	2 – 4	1 – 3
Average number of suppliers that bid	3.9	3.1	2.9	1.9
Average number of suppliers bidding between 2014–16	3.6	3.3	2.8	1.8

Source: IATA (sub. DR116, p. 19).

The market structure means prices for jet fuel are likely high

The price of oil, and refinery and transportation costs, are the principal components of jet fuel prices. The price paid at the wingtip includes a normal return on investment and, depending on the level of competition through the supply chain, jet fuel prices can also include a margin reflecting monopoly pricing. The price the importer (that is also often the end supplier) pays for fuel from the refinery depends on the contracts between the producers and importers. It is likely close to the import parity price of the Mean of Singapore Platts (MOPS) — the jet fuel index for the Asia-Pacific region. Transport costs include the cost of shipping (including wharfage, insurance and product loss) and the cost of access to infrastructure.

Airlines say prices are high

Participants have noted that a lack of competition is leading to large differentials for the price of jet fuel — the difference between the MOPS price and the price an airline pays — at Australian airports. IATA stated that the price differentials at Australian airports are much larger than other international airports:

In the case of the aviation fuel market in Australia, various market characteristics and the experience of airlines point towards a market that is not as effectively competitive as it could be. This has led to airlines paying a higher jet fuel price compared to markets outside Australia where competition appears to be more effective ... (sub. 27, p. 27)

IATA provided data (sub. DR116, table 8.2) to the Commission on behalf of its members that estimated the premium airlines pay at Australian airports compared with those elsewhere. Airlines estimate that they pay a premium of 0.8–2.2 US cents per litre, depending on the airport, due to a lack of competition.

... the significant price difference between SYD/BNE and MEL/PER is attributed in a large part, directly or indirectly, to the different degrees of effectiveness in jet fuel supply competition that has its root cause in the jet fuel infrastructure ownership model. (IATA, sub. DR116, p. 20)

Table 8.2 Airline estimates of price premium due to lack of competition

	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Perth</i>
Average premium ^a	0.8	1.8	1.1	2.2

^a Average of estimated premium paid by the airlines at the airport due to a lack of fuel supply competition (in US cents per litre).

Source: IATA (sub. DR116, p. 19).

Several airlines noted high jet fuel prices have implications for their businesses. In its submission, Virgin Australia Group stated that:

Jet fuel represents around a third of an airline's operating costs and therefore increased jet fuel prices can have a significant effect on airlines' costs. Weak competition for jet fuel supply leads to higher prices being paid by the airlines for this critical input, and ultimately higher ticket prices for our passengers. (sub. 54, p. 28)

BARA noted that prices could be lower if new entrants were able to find efficiencies:

... an alternative supplier may, for argument's sake, be able to achieve economies in, say, shipping, and it may be able to achieve economies in the areas of the supply chain itself. So it depends whether or not you think that evidence put forward actually represents the most efficient supply of fuel versus what a new competitor may be able to provide. (trans., p. 11)

Large price differentials were of concern in the 2011 BARA application under the National Access Regime. At that time, Emirates noted that 'the pricing levels at Sydney, Melbourne and Perth airports remains significantly higher than prices offered at competitive markets globally' (2011, p. 1).

Data remain inconclusive

Price differentials by themselves are not sufficient evidence that prices in Australia reflect a lack of effective competition. Differences in costs and regulations across airports and countries mean that price differentials are not directly comparable (figure 8.3). For example, comparisons do not take into account different planning and environmental regulations, distance from port to plane or different volumes supplied at each airport.

High transport costs due to the distance between Australia and the world market could explain part of a high price differential. BP, for example, noted that prices are high due to a long supply chain:

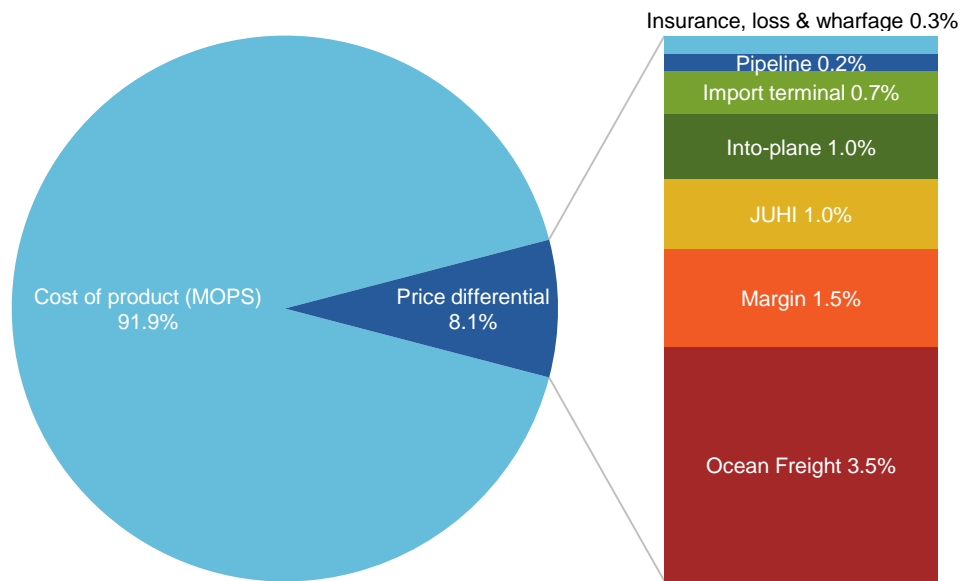
... the jet fuel transport logistics chain is much longer for Australian airports than it is for Changi Airport that involves much greater handling that in turn adds to costs. (sub. 47, p. 28)

Fuel prices may also be higher due to lower volumes of fuel transported to Australia. Fuel suppliers may not be able to achieve the economies of scale gained from higher volumes in ocean freight, terminal, pipeline and JUHI infrastructure. BP noted:

It is Air BP’s experience that Airports with larger throughputs can provide significant operational efficiencies and enjoy synergies on a per gallon basis versus smaller consumption airports. Hence scale and throughput materially impact a fuel supplier supply chain costs and economics when setting jet fuel differential to their customers. (sub. DR153, p. 4)

Data provided by Viva show that a large portion of its final fuel price is explained by the cost of the product along with its transportation cost (figure 8.3). However, as with price differential data, price build-up data should be interpreted carefully. A large proportion of Viva’s cost is an input cost, which fuel suppliers pass through to customers, and if there is a margin reflecting monopoly pricing it will be in the price differential.

Figure 8.3 Viva Energy jet fuel price build-up^{a,b}



^a Build-up of Viva Energy’s average jet fuel price at Sydney Airport in 2018. ^b Percentages are rounded to one decimal place.

Source: Viva (sub. DR125, p. 3).

Viva’s build-up of the differential does not indicate whether prices, costs or profits are at efficient levels, nor does it indicate the extent to which the price paid for the final product incorporates a competitive (or higher) rate of return on jet fuel infrastructure. For example, the JUHI infrastructure access price may be set at a level to include a return for the infrastructure owners (that includes Viva) above an efficient level. The Commission understands that infrastructure owners earn a return on their JUHI infrastructure, even if they do not supply fuel at an airport.

The Commission has been unable to determine the size of any margin due to the lack of competition from the information provided on jet fuel differentials and price build-ups. However, the structure of the markets to supply jet fuel alone, specifically the vertical integration and concentrated ownership of infrastructure, provides some scope and incentive for providers to charge prices above the efficient level.

Underinvestment may have occurred in some infrastructure services

The natural monopoly characteristics of jet fuel infrastructure, along with vertical integration and horizontal coordination, may have distorted the incentives for incumbent firms to invest. Participants have put forward a number of reasons for why there may have been underinvestment in the supply chain for jet fuel.

- The incumbent infrastructure providers have delayed investment in pipelines and JUHI infrastructure in order to benefit from congestion by charging higher prices (Virgin Australia Group, sub. 54).
- Incumbent infrastructure providers have underinvested in order to restrict capacity and therefore the scope for the declaration of infrastructure under the National Access Regime. In 2012, the NCC noted that when infrastructure owners added additional capacity to the Sydney jet fuel market with a new pipeline, the JUHI would be more likely to pass criterion (a) of the National Access Regime (NCC 2012).
- Underinvestment has occurred because the infrastructure owners — the JUHI joint ventures — are concerned that airports may take over JUHI infrastructure assets at nominal cost. Underinvestment may also occur where infrastructure owners have insufficient security of tenure (see below) to provide an adequate return for their investment (BP, sub. 47).

There is a lack of publicly available information to assess the extent to which underinvestment is a systemic problem in the jet fuel supply chain. However, the Commission has heard of some instances where infrastructure development has not kept pace with industry demand. For example, Virgin Australia Group (sub. 54) and other participants raised concerns with the level of investment in the Melbourne off-airport storage, pipelines and JUHI infrastructure. While lumpy investment is a feature of large natural monopoly assets, capacity constraints and the concern for fuel security were severe enough to require government action — the Victorian Government held an aviation fuel roundtable with industry participants to coordinate future investment.

Participants have previously raised concerns with the level of investment in the Sydney jet fuel infrastructure. In 2010, a newly formed Sydney Jet Fuel Infrastructure Working Group investigated the adequacy of supply infrastructure and barriers to investment. It may be possible that similar coordination will be required prior to the development of a new pipeline, currently forecast for 2023 (see below) (SJFIWG 2010).

Lease tenure and contract negotiations

Several participants noted to the Commission that lease tenure was an important feature of any JUHI lease with an airport (AIP, sub. DR123; BP, sub. DR153; Caltex, sub. DR167; Mobil, sub. DR139; Viva, sub. DR125). They suggested that an insecure lease tenure did not provide adequate incentives to invest in long term jet fuel infrastructure. Viva noted:

In terms of Melbourne airport, Viva Energy acknowledges that some joint venture on-airfield investment has been hindered by lack of term tenure and delays in formalising a new lease agreement for facilities on Melbourne Airport land. (sub. DR125, p. 5)

Australian Institute of Petroleum (AIP) noted that certainty is required for significant capital investments:

There must be clear investment signals and a stable investment and policy environment for industry to make the very significant capital investments in fuel supply infrastructure, including ongoing investment in maintain/expanding existing infrastructure and in new infrastructure itself. Crucial aspects includes lease tenure, a long term view of the market and stable government policies. (sub. DR123, p. 5)

It is understandable that jet fuel suppliers need certainty in lease contracts. Jet fuel infrastructure has high capital costs, long lead times and a long expected life. Fuel suppliers need to expect that their long-term investments in infrastructure will produce an adequate return and lease renegotiations will introduce additional uncertainty.

The length of a lease is important, but a short lease is not the only factor that can lead to uncertainty. The lease agreements between the Federal Airports Corporation (FAC) and the fuel companies were for a minimum of 15 years. Despite this length, there have still been issues associated with investment around the time of lease renegotiations. This indicates that there is a problem with uncertainty around the renegotiation of contracts rather than just the length of the contract. For example, even with a lease agreement of 20 years for the Melbourne JUHI, there remains a possibility that uncertainty could cause underinvestment prior to renegotiation of the next lease in 2037 (Melbourne Airport, sub. 33).

There are a number of ways that parties can address uncertainty arising from renegotiations of lease contracts for long-term infrastructure services. One option is for airports to own the infrastructure and contract out the operations to another party. This would remove transaction costs associated with complex negotiations over long-term infrastructure, but it would not be costless. An airport would incur search costs to find a new operator, monitoring costs to ensure the operator performs efficiently and transaction costs associated with exiting the previous agreement and entering a new one.

Another option is for airports and fuel suppliers to include terms in contracts that specify what will happen to new and existing infrastructure at the end of those contracts. The Commission understands that the contracts between fuel suppliers and airports already do

this to some extent. For example, Sydney Airport noted that it reimburses fuel companies for investments made in the lead up to lease renegotiation:

Currently, any new investment in fuel infrastructure (for example, an extension of the pipeline to fuel remote bays) requires the agreement of the JUHI JV despite the Lease providing for reimbursement of amounts invested during the last portion of the Lease or Sydney Airport offering to fund investment upfront. (sub. DR112, p. 29)

Melbourne Airport has included capacity benchmarks that require the fuel companies to meet agreed infrastructure targets:

There are new provisions in the agreement that require the JUHI to meet benchmarks for onsite storage capacity, input capacity into the JUHI, and a supply of hydrant infrastructure which is distributed throughout the whole airport precinct. (trans., p. 52)

The Commission agrees that uncertainty from renegotiation of JUHI lease contracts may cause issues, such as underinvestment in on- and off-airport infrastructure. However, parties to the agreement can address the problems caused by uncertainty through the commercial negotiation process. Intervention by government should focus on providing certainty around policy settings to allow fuel suppliers and airports to make more informed decisions and addressing market failures where they exist, including the potential for a lack of effective competition.

8.5 Is there a case for reform?

The Commission concluded in the draft report that markets to supply jet fuel at some airports are characterised by conflicts of interest associated with fuel companies owning the JUHI infrastructure, which means they have an incentive to inhibit access for new entrants. The Commission's conclusions relied on analysis of the characteristics of markets to supply jet fuel, along with information provided in submissions and public hearings.

Fuel suppliers, fuel infrastructure owners and the downstream fuel supply industry representative, AIP, challenged this draft finding. They argued that:

- JUHI joint ventures are infrastructure owners not fuel suppliers
- third party access is available on reasonable terms
- jet fuel prices are competitive and reflect the cost of transportation.

The Commission agrees that the structure of the JUHI joint ventures ensures there is independence for the JUHI owners to make some decisions separate from the interests of individual fuel suppliers. However, the JUHI joint venture is a contract between fuel suppliers, all of which are seeking to maximise their profits. While the contract may ensure independence for operational tasks, such as scheduling and testing, it does not prevent fuel suppliers from making some decisions that are in their own joint interests. For example, the JUHI joint venture members are required to make decisions around new investment in

infrastructure, lease terms and decisions on whether to grant access to new entrants, all of which would affect their individual market position as fuel suppliers.

The fuel suppliers and JUHI joint ventures noted that they are willing to provide access on reasonable terms to any third party willing to pay for equity access. They provided information on the processes and terms for new entrants to access the infrastructure. For example, past JUHI joint venture applicants have been provided with information on the process and the terms of entry, and have commenced the application process, although did not ultimately join the JUHI joint venture. Based on this information, it appears that fuel suppliers have not actively sought to deny access to jet fuel infrastructure, and are willing to provide the terms and grant access to genuine third party access seekers who meet the entry criteria.

Finally, the fuel suppliers noted that jet fuel prices are not excessive and that this is due to the large proportion of the final price that transport and input costs constitute. Based on information provided from airlines and fuel suppliers, the Commission has not been able to assess the extent to which prices are above efficient levels. The Commission considers that there is cause for concern due to the structure of the markets to supply jet fuel and conflicts of interest associated with fuel suppliers owning JUHI infrastructure. A small number of vertically integrated suppliers in markets to supply jet fuel has likely led to higher prices to access infrastructure services and higher jet fuel prices.

Is industry-specific access regulation justified?

The Commission has identified that the current market structure and infrastructure ownership arrangements do not favour competition in markets to supply jet fuel. In particular, limited access to infrastructure along the supply chain acts as a restraint on competition. Greater third party access to infrastructure services would increase competition and put downward pressure on prices to access those services, as well as on fuel prices. However, the government should weigh potential benefits from intervention to improve the conditions for competition against the potential costs, such as changes to incentives for infrastructure investment. Governments should only introduce policy changes where they would likely lead to net benefits to the community (chapter 2).

In the draft report, the Commission identified two options that could improve the conditions for competition in markets to supply jet fuel: an industry-specific access regime for jet fuel infrastructure or an application, by the designated Minister, for declaration of jet fuel infrastructure under the National Access Regime.

Industry-specific regime

The first option, an industry-specific access regime, would involve designing an access regime that is specific to jet fuel infrastructure. To justify a move to an industry-specific regime, evidence would need to show that it would result in net benefits and that the jet fuel

industry exhibits unique features that would justify a different regulatory approach to the National Access Regime (PC 2013b).

The Commission has received only limited information from access seekers, which has contributed to the challenge of assessing the size of the problem. Limited participation from access seekers does not suggest there is not a problem, or that there will not be access seekers in the future. However, the limited engagement does highlight the uncertainty of the benefits that can be realised from access regulation — if there are no new entrants or the threat of new entrants, prices will not fall.

The uncertainty around the design of an industry-specific regime (including the scope of infrastructure services covered) could have effects on incentives to invest before the regime is implemented. Even the knowledge that a government could introduce an industry-specific regime may change decisions. The possibility of real and potentially large costs from underinvestment and regulatory error once implemented — as was flagged by a number of fuel suppliers, such as Mobil (sub. DR139) and Viva Energy (sub. DR125) — makes industry-specific access regulation unattractive. Given the evidence of underinvestment in the Melbourne market around lease negotiations, the Commission considers that these costs could materialise if a government imposes regulation on the market to supply jet fuel.

The Commission considers that the National Access Regime remains an effective tool for providing access to significant infrastructure. If an entrant wishes to supply jet fuel at an airport and cannot obtain access on reasonable terms, it is still able to pursue access through this mechanism.

The National Access Regime, like an industry-specific regime, has costs, including the potential for some distortions on incentives to invest. However, the Commission notes that the National Access Regime criteria, along with its robust institutional arrangements, ensure that it is only applied when the benefits are likely to outweigh the costs of regulated third party access to infrastructure services. The NCC commented:

... the declaration process and the case-by-case assessment it entails, reduces the risk of regulatory error, and ensures that access regulation is only applied in response to clearly identified market failure, and where it serves the public interest and the benefit of promoting competition in related markets and efficient investment in infrastructure. (sub. DR156, p. 4)

Despite asking for further information in the draft report, the Commission received no information from access seekers on why third parties have not sought access to jet fuel infrastructure services under the National Access Regime.

The scale of the costs of an industry-specific regime could be large — ranging from burdensome administrative costs to potentially large distortions to investment incentives. Given this, the Commission considers that industry-specific access regulation may not result in a net benefit to the community at this time.

The Minister could apply for declaration under the National Access Regime

The second option the Commission identified was for the Minister for Infrastructure to apply to the NCC for a recommendation to declare infrastructure services. As discussed above, the National Access Regime acts as backstop regulation to provide third party access to infrastructure services to supply jet fuel.

The Commission does not consider it appropriate to recommend the Minister apply to the NCC for declaration of jet fuel infrastructure. While allowed under the National Access Regime, the Minister applying for declaration would have some procedural issues. Under the CCA, there are no requirements on what an applicant must include in their application, but the NCC must be satisfied that all criteria are met for a service to be declared. Access seekers are better placed to meet the information requirements and provide evidence that would inform the NCC's deliberations.

Airports are pursuing open access in JUHI lease negotiations

The structure of the markets to supply jet fuel has been influenced by historical factors including the privatisation of airports in the 1990s. The conditions for competition now appear to be improving in the industry. Some airports and fuel suppliers have acted to improve competition at the JUHI, through introducing open access in JUHI lease agreements. As noted above, this has already occurred at Melbourne and Darwin airports. In addition, Perth, Sydney and Adelaide airports are currently renegotiating the JUHI and JOSF leases and have indicated that open access will be an important feature of any new agreement.

The Sydney JUHI joint venture supported the implementation of an open access regime.

The JUHI JV would also like to note that it is in favour of implementation of an open access regime, based on a fee-for-use model (as distinct from an equity participation model) at Sydney Airport, which has been one of the items identified by the parties seeking access to the JUHI JV as a requirement. (sub. DR99, p. 3)

Adelaide Airport stated that it is currently considering open access:

... there is a sense that the previous system doesn't quite work and we are definitely interested and looking at opening up the access that we have at our airport. (trans., p. 412)

Perth Airport, said that it is negotiating a new lease agreement with the Perth JUHI joint venture:

... the discussions are around the key objectives that we're trying to achieve and one of them is security of supply and one of them is open access. So the key objective for us is to work with the JUHI operators on a new open access model. And so far the negotiations have been moving towards that and we're looking towards the Melbourne model as perhaps one model that could work ... (trans., pp. 442–443)

Fuel suppliers have also indicated support for open access as long as it provides an adequate return on sunk investments. Caltex noted:

... that there is an increasing trend towards including open access regimes in new JUHI agreements, such as that developed in the new lease agreement for Melbourne Airport. Caltex welcomes competition and is supportive of mechanism which allow for open access, under suitable regimes which recognise the significant investment in infrastructure undertaken by the JUHI JV participants and allows for a return on investment to be gained. (sub. DR167, p. 4)

Including open access in lease agreements is a positive development in markets to supply jet fuel. It could allow third parties to gain access to the supply chain and increase competition. Open access JUHI infrastructure will remove a hurdle for new fuel suppliers and will provide greater certainty for decisions on establishing an upstream supply chain.

The structure of markets to supply jet fuel, including limited access to upstream infrastructure over the long-term, at the monitored airports gives cause for concern with the level of competition. Markets are characterised by a small number of vertically integrated suppliers and high barriers to entry, and this has likely led to higher prices to access infrastructure services and higher fuel prices.

At this time, there is no role for industry-specific regulation. Airports and fuel suppliers would likely generate better outcomes than a regulatory approach for access to JUHI infrastructure.

The Australian Government should stipulate in the terms of reference for the next airports inquiry that the Productivity Commission assess the state of competition in markets to supply jet fuel, and review progress toward open access at JUHIs.

FINDING 8.1 PRICES ARE LIKELY HIGH BUT THERE IS NO ROLE FOR NEW ACCESS REGULATION

The structure of markets to supply jet fuel at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) gives cause for concern about the level of competition. The markets are characterised by vertically integrated suppliers and high barriers to entry and this has likely led to higher prices to access infrastructure services and higher fuel prices.

Any change to the regulatory environment at this time is likely to result in a net cost to the community. The risks associated with industry-specific access regulation could be considerable, given the potential effect on infrastructure investment incentives. The National Access Regime under Part IIIA of the *Competition and Consumer Act 2010* (Cwlth) remains an effective tool for providing access to significant infrastructure.

Some airports and fuel suppliers have acted to improve competition at the joint user hydrant installation (JUHI), through introducing open access in JUHI lease agreements. This removes a hurdle to accessing the JUHI infrastructure but does not improve access to upstream infrastructure.

Western Sydney Airport

Australian Government ownership of Western Sydney Airport provides a unique opportunity to establish strong practices around access to jet fuel infrastructure from the airport's initial development stage. Open access on-airport jet fuel infrastructure would avoid competition problems associated with limited access JUHI infrastructure when the airport commences operation. It would be consistent with the direction that a number of Australian airports are taking with their JUHI arrangements, and the approach that is in place at many airports internationally (box 8.2). Early indications are that open access at JUHIs in Australia could lead to competition benefits, as suggested by Melbourne Airport (sub. 33) and Northern Territory Airports (sub. 8).

In the draft report, the Commission recommended that the Western Sydney Airport Corporation should ensure that the JUHI infrastructure at the airport is open access and that this is a condition of any future privatisation. The Minister for Finance and the Minister for Urban Infrastructure — the Shareholder Ministers on the Western Sydney Airport Corporation Board — should recommend to the Board that it take this course of action.

This draft recommendation received strong support from airlines, fuel suppliers and industry bodies following the release of the draft report (AIP, sub. DR123; BARA, sub. DR92; BP, sub. DR153; Caltex, sub. DR167; Virgin Australia Group, sub. DR142). For example, Virgin Australia Group commented:

Virgin Australia welcomes the recommendation for open access to jet fuel infrastructure at the new Western Sydney Airport. We have previously advocated for an open access regime, to improve the conditions for competition in the supply of jet fuel at major airports. (sub. DR142, p. 18)

Fuel suppliers stressed the importance of ensuring the open access arrangements support long term infrastructure investment. For example, BP told the Commission that it supports an open access model that provides clarity around the long-term operating environment so that 'the industry can make future investment decisions throughout the supply chain' (sub. DR153, p. 5). Caltex commented:

... any new JUHI infrastructure should be established in a manner which still recognises the significant capital outlay required and allows for a suitable return on investment to be generated by whichever party develops it regardless of whether that is the industry, the airport, or an alternative provider. (sub. DR167, pp. 1–2)

The benefits of open access on-airport jet fuel infrastructure would be greater if accompanied by access to upstream supply chain infrastructure. As volumes increase, the Western Sydney Airport Corporation should seek to ensure that infrastructure investments facilitate competition, rather than hinder it.

RECOMMENDATION 8.1 JET FUEL INFRASTRUCTURE AT WESTERN SYDNEY AIRPORT

Through the Shareholder Ministers of the Western Sydney Airport Corporation (the Minister for Finance and the Minister for Urban Infrastructure), the Australian Government should recommend to the Western Sydney Airport Corporation Board that the on-airport jet fuel infrastructure operate on an open access basis and that this should be a condition of any future privatisation.

Greater investment planning

The jet fuel supply chain is critical for aviation operations and requires sufficient capacity to minimise fuel disruptions. Infrastructure owners need certainty, including through long-term leases with airport operators, to make investments in jet fuel infrastructure. Long-term investment should be supported by good planning and consultation between fuel companies, airports, airlines and the Australian, State and Territory Governments.

Investment planning in the jet fuel supply chain could be improved through regular consultative processes at each monitored airport involving the fuel suppliers, airports, airlines and government agencies. This may not directly address underinvestment concerns but would reduce instances where there has been uncertainty and a lack of coordination in investment planning. It could also lead to better outcomes for fuel security (noting that the Australian Government is currently considering other approaches to fuel security, including a review into Australia's liquid fuel security). The Commission understands that similar processes in the past have been beneficial, specifically the Aviation Industry Roundtable established in Melbourne in 2017.

The Department of Infrastructure, Regional Development and Cities suggested that the Australian Government could establish an ongoing consultative process through the master planning process:

The department also suggests there may be merit in exploring whether investment clarity and competition of jet fuel supply could be supported by requiring jet fuel arrangements to be foreshadowed by airport operators as part of airport master planning processes. (sub. 40, p. 27)

This proposal received support from airlines, airports and fuel suppliers following the release of the draft report, including from AIP (sub. DR123), BARA (sub. DR92), Caltex (sub. DR167) and Qantas Group (sub. DR115).

The jet fuel suppliers expressed their support but noted that the scope and design of the groups is critical. AIP stressed that it should focus on the master planning process:

AIP member companies support in-principle the PC's draft Recommendation 8.2 to establish a jet fuel infrastructure coordination forum, if directly focused on the discussion of the master planning and coordination of infrastructure investment at the airport and involving airport infrastructure owners and operators. (sub. DR123, p. 5)

Caltex and BP noted that the groups should take into account the commercial sensitivities associated with the industry:

... any Coordination Forum established should be designed in a clear manner to protect commercial sensitivities and have a demonstrable value to the ongoing operation and development of airports as a whole. (Caltex, sub. DR167, p. 2)

BP is also of the view that the powers of jet fuel forums, other than between Airports and JUHI JVs, must be clearly articulated to avoid impinging on commercial rights or sensitivities. For example, commercial requirements can prevent fuel suppliers revealing future upstream investment decisions until an appropriate time. (BP, sub. DR153, p. 5)

Industry participants, airports and governments should work together at the initial stage of the process to determine the scope and design of the group for each monitored airport. They should consider the membership, objectives, rules, outputs and frequency meetings when designing the group's role.

The situation at each of the monitored airports varies, and therefore the infrastructure planning forum should be sufficiently flexible to suit each individual airport's fuel demand and future investment needs. However, generally, the group could discuss issues such as:

- capacity constraints and any foreseeable pressure points
- linkages between different parts of the infrastructure supply chain
- demand forecasts and actions to ensure security of supply
- future infrastructure requirements and investment planning.

The groups should adhere to the JIG core principles (box 8.1) to prevent any breaches of competition law. For example, the rules of the infrastructure group should strictly prohibit discussions of price, customer or quantity information. Before introducing the group, the Australian Government should consider seeking authorisation from the ACCC to prevent any breaches of Part IV of the CCA.

RECOMMENDATION 8.2 INTRODUCING JET FUEL INFRASTRUCTURE PLANNING GROUPS

The Minister for Infrastructure should recommend a jet fuel infrastructure planning group be incorporated into the master planning process at each monitored airport. The group should be sufficiently flexible to suit the arrangements at each airport, but could be tasked with discussing, among other things:

- capacity constraints and any foreseeable pressure points
- linkages between different parts of the infrastructure supply chain
- demand forecasts and actions to ensure security of supply
- future infrastructure requirements and investment planning.

8.6 Some airports charge fuel throughput levies

Airport operators charge the JUHI operators lease and licence fees for use of airport land to provide jet fuel infrastructure. Some airports charge fuel suppliers an additional fuel throughput levy on each litre of fuel supplied. A number of airports — including Sydney, Canberra, Darwin, Archerfield, Alice Springs and Tennant Creek — charge jet fuel throughput levies (BP, sub. 47; Qantas Group, sub. DR115).

Throughput levies are the norm at some airports overseas where airport operators own the storage and hydrant infrastructure. For example, Hong Kong Airport owns the JUHI infrastructure and charges a throughput fee (box 8.2). In this case, the throughput fee is a mechanism for the airport operator to recover the cost of providing the infrastructure, and is similar to the JUHI infrastructure owners in Australia recovering the cost of providing infrastructure services through the fees charged to airlines.

Fuel throughput levies have been a longstanding point of disagreement for airlines, jet fuel suppliers and airports. The issue first arose in 1995 when the FAC considered charging a levy while negotiating standard licences with the JUHI joint ventures, a move that the fuel suppliers strongly resisted. When the first 15 year leases were eventually agreed in 1997 they included the right to charge a fuel throughput levy, although the FAC itself did not introduce one. Brisbane Airport introduced a levy in 1998 following privatisation, while Perth Airport introduced a levy in 1999. In 2011 Sydney Airport introduced a fuel throughput levy and is now the only monitored airport that does so.

Participants have raised three issues with the fuel throughput levy during this and the Commission's previous airports inquiries:

- whether airports have a contractual right to charge a fuel throughput levy
- whether a throughput levy is an exercise of market power
- whether a fuel throughput levy is efficient.

The issue of whether airports have a contractual right to charge a fuel throughput levy was subject to a dispute between Shell (now Viva Energy) and Brisbane Airport in 1997. The dispute was referred to an independent third party to determine and it was found that '[Brisbane Airport (BAC)] had a legal right to charge the levy and the level of 0.4 cents per litre was reasonable in terms of BAC's contractual right' (ACCC 1998, pp. 16–17).

The leases between the airports and fuel suppliers have since been renegotiated which provided fuel suppliers the opportunity to attempt to remove the fuel throughput levies from contracts. However, as noted by Sydney Airport, the throughput levy was negotiated (and subsequently agreed to) with the Sydney JUHI joint venture:

The Fuel Throughput Levy (FTL) forms part of a pricing structure that was negotiated at arms-length between Sydney Airport and the Joint User Hydrant Installation Joint Venture (JUHI JV), both sophisticated parties. (sub. DR112, p. 28)

On this basis, it appears that Sydney Airport is simply exercising a contractual right in charging a fuel throughput levy. If an airport were to introduce a fuel throughput levy *outside* of a lease agreement, this could be an example of an airport exercising its market power.

The second issue that participants raised is that a fuel throughput levy does not have a cost justification and that this represents an exercise of market power. For example, some stakeholders raised concerns that airport operators who charge a fuel throughput levy (in addition to lease and licencing fees) do not provide a service for this charge. As Qantas Group noted:

The FTL [Fuel Throughput Levy] is often not commensurate to the provision of any additional products or services. Airport revenue from the FTL represents a windfall gain, worth millions of dollars to Australian monopoly airports annually. (sub. 48, p. 35)

Caltex considered that throughput levies should be associated with the provision of a service:

... our overarching comment is really that Caltex firmly supports the ICAO [International Civil Aviation Organization] principle there, that charges should be related to the cost of providing airport facilities and services. (trans., p. 151)

However, Sydney Airport noted that its throughput levy is associated with the provision of a service — it is just one part of the multi-part price for the lease of airport land.

Under the Lease, Viva Energy pays Sydney Airport a low base site rent for the leased area plus a FTL, based on the volume of fuel provided to the airlines. Effectively, through this structure, Sydney Airport takes the risk of fuel volumes which provides the JUHI JV with a degree of protection in the event of a slowing market. (sub. DR112, p. 29)

Claims that the levy is not for a service are unfounded given this pricing structure was agreed between the parties for the lease of the JUHI land.

The issue, then, is whether a fuel throughput levy is an efficient charge. A two-part tariff is a form of price discrimination than can achieve greater allocative efficiency by charging a fixed price plus a variable volume-based levy (box 2.1). Normally a monopolist would seek to maximise profits by reducing supply through higher prices, leading to an underproduction of services. However, a monopolist can maximise profits and produce enough services to achieve allocative efficiency through multi part pricing.

Fuel throughput levies can be suitable if they are part of an efficient pricing structure. The *Aeronautical Pricing Principles* — which articulate how airports should set access charges for aeronautical services, including refuelling services — allow for airports to introduce price structures that include ‘multi-part pricing and price discrimination when it aids efficiency’ (box 2.4). The Commission notes that a fuel throughput levy could indicate an exercise of market power if an airport introduced one outside of a lease agreement, but it has not seen evidence of this occurring in practice.

9 Improving airport regulation

Key points

- Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) have not exercised their market power in commercial negotiations, the provision of aeronautical services, or in car parking, to the detriment of the community.
- Imposing additional regulation on airports would only be justified if airports were exercising their market power. The current approach to airport regulation benefits passengers and the community and remains fit for purpose at this time.
- The monitoring regime should be strengthened to enhance transparency over airports' operations and to more readily detect the exercise of market power.
 - Monitored airports should be required to provide the Australian Competition and Consumer Commission (ACCC) with more detailed information on their operations and financial performance in relation to their aeronautical, car parking and landside access services.
- Quality of service monitoring should be updated to emphasise indicators that reflect outcomes valued by airlines and passengers, drawing on the indicators that airports and airlines currently use in service level agreements.
- Some agreements between airports and airlines contain clauses that constrain an airline's access to regulatory remedies for the exercise of market power and clauses that restrict an airport's ability to offer incentives to airlines other than the signatory airline. These (and any other) anticompetitive clauses should be removed from all agreements between airport operators and airport users.
- The second-tier monitoring regime serves no policy purpose and should be discontinued. Government agencies, industry bodies and other stakeholders do not use the information that airports publish to comply with the voluntary monitoring regime, and none of the participating airports currently have significant market power. There is sufficient public information available for the Commission to make future assessments of whether an airport has market power, or whether it should be added to the ACCC monitoring regime.
- Airport users can apply for declaration of airport services and arbitration over terms of access through the National Access Regime, which incorporates safeguards to ensure that arbitration only occurs where it would promote competition and the public interest.
- Some airline participants and the ACCC have called for the introduction of an airport-specific negotiate-arbitrate framework that bypasses the safeguards in the National Access Regime. The proposed regime should not be implemented as it would have few benefits and substantial risks, including:
 - undermining the incentives for genuine commercial negotiation
 - increasing the risks that airports would face in making investments and distorting their incentives to make investments
 - creating opportunities for incumbent airlines to engage in anticompetitive conduct.

This chapter summarises the evidence on whether Sydney, Melbourne, Brisbane and Perth airports (the monitored airports) have exercised their market power in the provision of aeronautical services, car parking and landside access. On the basis of the evidence on airports' conduct when negotiating with airport users, and their financial and operational performance, the Commission has concluded that the light-handed regulatory regime that has been in place since 2002 remains fit for purpose. The Commission is, however, recommending improvements to the monitoring regime to enhance transparency over airports' operations and to more readily detect the exercise of market power.

The Commission's assessment of the merits of the proposal for an airport-specific negotiate-arbitrate regime is also set out in this chapter.

9.1 Evidence of airports' conduct and performance

The monitored airports have significant market power in domestic and international aeronautical services (chapter 3), at-terminal car parking and landside access (chapter 6). There is a *prima facie* case for regulatory intervention to address the potential for those airports to exercise their market power.

The Commission examined quantitative and qualitative evidence on the monitored airports' conduct and performance to determine whether their operations, charges, investment and measures of profitability are consistent with the exercise of market power (table 9.1). Some airport performance indicators could present cause for concern if considered in isolation. High international charges at Sydney and Brisbane airports, Sydney Airport's profitability, and high operating costs at Perth Airport show that there is reason to remain vigilant. On balance, most indicators of operational efficiency (including costs and service quality), aeronautical revenue and charges, and profitability are within reasonable bounds. Each airport has generated returns sufficient to enable investment while not earning excessive profits, and passengers consider airports to have good service quality. Airport car park prices are consistent with the costs of service provision (including the opportunity cost of land) and the need to manage congestion.

Overall, the evidence does not suggest that the monitored airports have systematically exercised their market power in aeronautical services, car parking or commercial negotiations to the detriment of the community.

Table 9.1 Monitored airports' performance and the regulatory regime

	<i>The airports' performance</i>	<i>The regulatory regime</i>
Aeronautical services		
Commercial negotiation	Commercial negotiations can be challenging but, on balance, the monitored airports have not exercised their market power in negotiations with airlines. Some agreements between airports and airlines contain anticompetitive clauses.	Regulation is fit for purpose. The negotiation process could be improved if standard negotiating principles were developed. Government should amend the <i>Aeronautical Pricing Principles</i> to specify that agreements must not contain anticompetitive clauses.
Operational efficiency — costs and input utilisation, and service quality	Input utilisation is reasonable at the monitored airports. High operating costs at Perth Airport can be explained by the airport's investment cycle and the resources boom. Passengers consider airports to have good service quality. Airlines are less satisfied.	The monitoring regime could be strengthened by: <ul style="list-style-type: none"> • requiring airports to provide more detail on the revenues related to international and domestic aeronautical services (and for Sydney Airport, services to regional NSW)
Aeronautical charges	Domestic — within reasonable bounds. International — relatively high at Sydney and Brisbane airports.	<ul style="list-style-type: none"> • requiring airports to provide more information on the costs of providing services and their methodologies for allocating those costs
Return on aeronautical assets and investment	Monitored airports' returns on assets have enabled investment but are not excessive High returns at Sydney Airport reflect a lack of investment opportunities.	<ul style="list-style-type: none"> • updating quality of service indicators to reflect outcomes that are valued by airport users.
Car parking		
Prices	Car parking prices are consistent with the costs of service provision, the need to manage congestion and the value consumers place on convenience.	Monitoring is the right approach to regulation, but could be strengthened by requiring airports to provide more detailed data on:
Investment	Acceptable — airports have not deliberately restricted supply of parking.	<ul style="list-style-type: none"> • the number of car park users • the revenues and costs of car parking services.
Quality of service	Acceptable according to service users.	
Landside access		
Charges and other terms of access	The available evidence suggests that the <i>structure</i> of landside access charges appears to be consistent with efficient operations. The Commission is unable to be definitive about the <i>level</i> of charges due to inadequate data.	Monitoring is the right approach to regulation, but could be strengthened by requiring airports to provide more detailed data on: <ul style="list-style-type: none"> • the number of vehicles that use different landside services
Commercial negotiation with landside operators	Based on the available evidence, the monitored airports have not exercised their market power in negotiations with landside operators.	<ul style="list-style-type: none"> • the charges and terms of access • common costs of landside services and methodologies for allocating those costs
Investment and quality of service	Investment has been reasonable and airports have provided acceptable quality of service.	<ul style="list-style-type: none"> • operating revenues and costs for landside services.
Second-tier airports	Do not have significant market power.	Discontinue the second-tier monitoring regime.
Regional airports	Do not have significant market power. Are prone to poor decision making and governance.	Infrastructure investments that receive government funding should be independently assessed. Governments should provide better guidance on how to manage assets at regional airports.

9.2 Existing airport regulation remains fit for purpose

Continue with light-handed regulation that is tailored to airports

Some inquiry participants compared the regulation of airports to the regulation of other infrastructure services with natural monopoly characteristics, and argued that airport regulation should be increased to align it with other sectors.

The ACCC and the Australian Energy Regulator (AER) regulate a number of infrastructure services including electricity, gas, telecommunications, rail, bulk water and wheat ports. Airports do not face the same level of regulatory oversight, despite this important sector exhibiting strong natural monopoly characteristics. Indeed, monitoring is the most light handed of the suite of regulatory tools available. (ACCC, sub. 59, p. 11)

Other monopolies such as telecommunications, utilities, transmission networks and rail networks have been far more scrutinised than airports in recent years. (Qantas Group, sub. 48, p. 7)

Commercial arbitration is commonplace in other settings and sectors; it is available in the electricity, telecommunications, gas and grain markets, for example. (A4ANZ, sub. DR106, p. 48)

The sectors identified by the ACCC and airline participants are all subject to the general provisions of competition law, including the National Access Regime under Part IIIA of the *Competition and Consumer Act 2010* (Cwlth) (CCA). In addition, they are subject to various types of industry-specific economic regulation. Each of the sectors identified by the ACCC and airline participants has different characteristics, including market structure, switching constraints faced by service users, and the level of countervailing power. The Australian Government has tailored regulation to the structure of each service and market, and the specific economic problems that it has been seeking to address — there is no single model of economic regulation that should apply to different monopoly infrastructure services. Taking a case-by-case approach is more likely to lead to effective regulation than imposing the same regulatory regime on sectors with different characteristics.

The Commission has drawn on lessons from regulation in other industries — positive and negative. For example, in its 2013 report into *Electricity Network Regulatory Frameworks* the Commission found that flaws in regulation contributed to ‘spiralling network costs’ and increasing electricity prices (PC 2013a, p. 2). The Commission has been mindful of the potential effects of regulation on investment in its assessment of the proposal for an airport-specific negotiate-arbitrate regime.

Airports face consequences for exercising market power

Some inquiry participants argued that the Commission should recommend steps to increase the threat of consequences for airports that exercise their market power (for example, A4ANZ, sub. DR106; ACCC, sub. DR158; Arblaster, sub. DR91; Qantas, sub. DR115). The Commission considers that airports currently face a credible threat of consequences if they

exercise their market power. If it considered that airports are exercising their market power, the Australian Government could:

- declare under section 95X of the CCA that an airport is required to notify the ACCC if it intends to increase the price of its services and take into account the regulator’s assessment of the proposed price change (noting the assessment would not be binding on the airport operator)
- require an airport (or airports) to lodge an access undertaking with the ACCC over one or more of its infrastructure services for a specified period
- deem certain airport infrastructure services to be declared for the purposes of the National Access Regime
- regulate the price of certain airport services, such as by reintroducing the price cap approach that applied for five years following the privatisation of airports
- direct the ACCC to conduct a price inquiry under Part VIIA of the CCA into the activities of a particular airport.

Each of these measures would have effects on airports. Some, such as declaration under the National Access Regime or the imposition of an access undertaking, would have significant consequences for airports’ commercial negotiations and investment decisions. Other measures would lead to increased information disclosure and the threat of increased regulation. Most of these actions could be implemented through a statement or declaration by the Minister. The threshold for taking action depends, in part, on their consequences — some would require a higher level of proof or evidence of a more significant problem.

These measures amount to a credible threat that the Australian Government is able to take action if an airport is found to have exercised its market power to the detriment of the community. The Commission’s periodic inquiries into airport regulation are an opportunity for an independent assessment to determine whether any of these measures is necessary. The threat of consequences would be increased if the Australian Government implements the Commission’s recommendations in this report to strengthen the monitoring regime.

Continue with annual monitoring and periodic PC inquiries

The pillars of the regime for economic regulation of airports should remain in place, including annual price and quality of service monitoring administered by the ACCC and periodic reviews by the Productivity Commission — both are critical to deliver transparency over airports’ operations and to maintain a credible threat of additional regulation. Capital city airports that are not part of the annual monitoring regime, and airports in regional centres, do not have a level of market power that justifies increased monitoring at this stage.

As discussed in chapter 7, the planned opening of Western Sydney Airport in 2026 could provide greater opportunities to increase regional air transport in New South Wales: directly by providing alternative air transport services to regional areas; and indirectly if it leads to

airlines moving services to Western Sydney, freeing up capacity at Sydney Airport. The next Commission inquiry into airport regulation should consider the continued need for regional access arrangements at Sydney Airport in light of the development of Western Sydney Airport and any other future considerations.

The Commission concluded in chapter 8 that the structure of the markets to supply jet fuel and conflicts of interest associated with fuel suppliers owning joint user hydrant installation infrastructure are a cause for concern. The markets are characterised by a small number of vertically integrated suppliers and high barriers to entry, and this has likely led to higher prices to access infrastructure services and higher jet fuel prices.

Continue with dual-till monitoring

Currently the ACCC reports aeronautical and non-aeronautical revenues, costs and assets separately. This is referred to as dual-till monitoring (chapters 1 and 2). Some inquiry participants argued for single-till monitoring, where all revenues, costs and assets are reported together, including those associated with non-aeronautical services; such as retail and business parks (IATA, sub. 27). Others suggested a hybrid-till approach where a proportion of non-aeronautical revenue is reported with aeronautical revenue (Qantas Group, sub. DR115). The Commission does not agree with this suggestion.

A dual-till approach to monitoring provides more information about airport revenues and costs than a single- or hybrid-till approach. The information gathered through dual-till monitoring can be used to assess airports on a single-till basis and can also be used to construct a hybrid till. The reverse is not true — it is not possible to back out a dual-till analysis from single- or hybrid-till monitoring. Dual-till analysis is important because airport operators could exercise market power in one aspect of their services without achieving excessive profits on a whole-of-airport basis. Adopting a single or hybrid-till approach to monitoring would reduce the information that is available to the Commission and other stakeholders to identify whether an airport operator has exercised its market power. The dual-till approach to monitoring should continue.

Facilitate scrutiny of contracts to prevent anticompetitive clauses

Some agreements between airports and airlines contain clauses that constrain an airline's access to regulatory remedies for the exercise of market power and clauses that restrict an airport's ability to offer incentives to competitor airlines ('no less favourable' clauses). These clauses are anticompetitive and should be removed from all agreements between airport operators and airlines, as should any anticompetitive clauses in agreements with other airport users.

In the draft report the Commission recommended that the Australian Government amend the *Aeronautical Pricing Principles* to specify that any agreement between an airport and an airport user must not contain anticompetitive clauses. The ACCC supported the draft

recommendation (sub. DR158), as did Melbourne Airport (sub. DR107), Brisbane Airport Corporation (sub. DR109), and Perth Airport (sub. DR114). Sydney Airport stated:

Sydney Airport considers that there are sound commercial reasons for including Declaration Clauses in agreements with airport users. However, Sydney Airport has noted the Commission's view, and agrees that it will not enforce any such clauses and will not include them in future agreements. (sub. DR112, p. 31)

Virgin Australia Group did not support the draft recommendation. Regarding the clauses that penalise airlines for participating in an application under the National Access Regime, it stated:

Virgin Australia agrees that provisions restricting an airline's ability to exercise its statutory rights under the National Access Regime have no place in commercial agreements for access to critical infrastructure such as airports. However, we do not consider this to be an isolated issue of 'anticompetitive clauses' which simply need to be excised from relevant agreements. Rather, this is symptomatic of a gross imbalance in bargaining power as between airports and airlines.

Therefore we do not consider that the appropriate remedy is to simply prohibit such clauses. This would be to treat one symptom of a much broader issue, without treating the underlying cause. Rather, we consider that a more comprehensive solution is required to address the imbalance in bargaining power as between airports and airlines. (sub. DR142, p. 20)

The Commission agrees that airlines and airports do not always have equal bargaining power in negotiations, although it is not the case that airports systematically hold a stronger bargaining position. The imbalance in bargaining power has not led to outcomes that are inefficient or detrimental to the community as a whole (chapters 4 and 5). There is no need for sweeping reforms to attempt to rebalance bargaining power. However, where there is evidence of anticompetitive behaviour that can be dealt with through a straightforward, targeted measure, the Commission considers that the Australian Government should take action to facilitate competition.

Regarding the 'no less favourable' clauses, Virgin Australia Group stated:

Virgin Australia does not consider it necessary or appropriate to impose an outright ban on provisions in airport access agreements that "directly or indirectly reference the terms being offered to users' competitive rivals". Such provisions will not necessarily be anti-competitive, and indeed may be pro-competitive and/or efficiency-enhancing in some cases. (sub. DR142, p. 20)

The Commission does not see any realistic mechanism for such clauses to promote competition. They benefit airlines that have agreements with airports and limit airport operators' ability to provide incentives to other airlines. Prohibiting these clauses might be to the detriment of signatory airlines, but it could facilitate increased competition and have benefits for consumers.

Qantas Group (Qantas, QantasLink and Jetstar) did not object to the draft recommendation, but identified a weakness in the Commission's proposed mechanism of an amendment to the *Aeronautical Pricing Principles*.

We have no objection to such a recommendation, we would simply submit that the problem with the *Pricing Principles* are that they are not enforceable, that airports, in our experience, don't take them very seriously. (trans., p. 273)

The Commission acknowledges that the *Aeronautical Pricing Principles* are not enforceable, but considers that they form a part of the current, effective light-handed regulatory regime. As stated in chapter 2, the Commission has drawn on the *Aeronautical Pricing Principles* in its assessment of whether airports have exercised their market power and in its assessment of parties' conduct in commercial negotiations. It could have made recommendations for reforms to airport regulation if it had found that an airport operator had breached those principles in a material way (such as by setting unduly high aeronautical charges or earning excessive profits).

A future Commission inquiry into airport regulation would draw on the *Aeronautical Pricing Principles*, and including the Commission's proposed amendments would formalise the expectation that airports' agreements with airport users should not include anticompetitive clauses. The Commission is recommending a further instrument to strengthen the effects of the *Principles*. The Australian Government should stipulate in the terms of reference for any future Productivity Commission inquiry that the monitored airports, on request, make their agreements with airport users available to the Commission on a commercial-in-confidence basis so it can identify whether they contain clauses that have the effect of limiting competition.

The Commission currently has the ability to request information from participants under the *Productivity Commission Act 1998* (Cwlth), but did not need to use these powers in this inquiry because airports agreed to the Commission's request for confidential access to a number of agreements. This cooperative approach is the most desirable outcome. The Commission would not hesitate to recommend further measures if it identifies any anticompetitive clauses in agreements at the time of the next inquiry.

If the threat of additional regulation arising from a Commission inquiry is not enough to change the behaviour of airports and airlines in a timely manner, a further option would be for the ACCC to pursue the matter. The ACCC submitted that it 'agrees with the Productivity Commission's view that such clauses should be removed from all agreements' (sub. DR158, p. 20). Section 45 of the CCA prohibits contracts, arrangements, understandings or concerted practices that have the purpose, effect or likely effect of substantially lessening competition in a market, even if that conduct does not meet the stricter definitions of other anticompetitive conduct, such as cartels. The ACCC is responsible for investigating and enforcing this provision (and other competition provisions of the CCA).

RECOMMENDATION 9.1 REMOVING ANTICOMPETITIVE CLAUSES FROM AGREEMENTS

The Australian Government should amend the *Aeronautical Pricing Principles* to specify that any agreement between an airport and an airport user must not contain anticompetitive clauses. This includes clauses that would constrain a user's access to regulatory remedies for the exercise of market power and clauses that directly or indirectly reference the terms offered to users' competitive rivals.

RECOMMENDATION 9.2 FUTURE PRODUCTIVITY COMMISSION REVIEWS

The Australian Government should continue the practice of five yearly Productivity Commission inquiries into the economic regulation of airports, to determine the effectiveness of the regulatory regime in achieving the following objectives:

- promoting the economically efficient operation of, and timely investment in, airports and related industries
- minimising unnecessary compliance costs
- facilitating commercially negotiated outcomes in airport operations.

In requesting the next inquiry, the Australian Government should also ask the Commission to consider:

- whether any airports should be added to, or removed from, the price and quality of service monitoring regime
- if there is a continued need for arrangements to facilitate access for airlines servicing regional New South Wales
- the state of competition in markets to supply jet fuel, including progress toward open access joint user hydrant installation infrastructure lease agreements.

The Australian Government should stipulate in the inquiry terms of reference that the monitored airports make their agreements with airport users available to the Commission on request, on a commercial-in-confidence basis.

An airport-specific negotiate-arbitrate regime would be detrimental

Airlines, A4ANZ and the ACCC suggested introducing an airport-specific negotiate-arbitrate framework for airport services. Under the proposal, airports that are included in the regime would negotiate with airport users on the terms of access to airport infrastructure services. Any party could request that an arbitrator be appointed to resolve a dispute at any time it considered that negotiations were not leading to a favourable outcome.

Airport users currently have access to arbitration through the National Access Regime. The declaration criteria, along with the opportunities for merits and judicial review, are safeguards to ensure that arbitration is only available when it would encourage competition and promote the public interest. The proposal for an airport-specific regime would not

include the safeguards of the declaration stage — effectively any airport that was included in the system would be ‘deemed’ declared.

The Commission has concluded the current approach to the economic regulation of airports benefits passengers and the community and remains fit for purpose at this time and no major changes are justified. Although it is not recommending the implementation of the negotiate-arbitrate framework, the Commission has considered the merits of the proposal and is setting out its assessment to inform future discussions.

Arbitration and safeguards in the National Access Regime

The National Access Regime establishes safeguards at several steps in the process of declaration and arbitration.

- The declaration criteria limit declaration of an infrastructure service to cases where it can be demonstrated that access as a result of declaration would promote a material increase in competition in a separate but related market and be in the public interest.
- Decisions to declare an infrastructure service can be appealed to the Australian Competition Tribunal, the Federal Court and the High Court.
- Once an infrastructure service has been declared, the arbitrator (the ACCC) is required to conduct the arbitration and make its determination in line with rules that are legislated in the CCA (box 9.1).
- An arbitration determination can be appealed to the Federal Court.

The Australian Government has enacted these safeguards to ensure that the outcomes of applications for declaration and arbitration are in the interests of the community as a whole.

Airlines are seeking to bypass the safeguards of the National Access Regime

A4ANZ submitted a draft design of a proposed model for how an airport-specific negotiate-arbitrate regime could be implemented (sub. DR180). It proposed an amendment to the *Airports Act* 1996 (Cwlth) that would establish a right for an airport operator or airport user to seek arbitration if they could not reach agreement on one or more matters relating to access to airport services. The regime would apply to all core regulated airports (chapter 1). Regional Express (Rex) suggested that ‘regional airports’ also be included (sub. DR108). Both the A4ANZ and Rex proposals would impose a negotiate-arbitrate framework on the monitored airports, which have significant market power, and on airports that do not have significant market power.

A4ANZ suggested an amendment to the *Airports Regulations* 1997 (Cwlth) that would set out principles to guide arbitration. The *Airports Regulations* would specify matters that the arbitrator must take into account, which are similar to the requirements for the ACCC as arbitrator under the National Access Regime (box 9.1). A4ANZ also proposed that the *Aeronautical Pricing Principles* would constitute part of the guidance for arbitration.

Box 9.1 Rules for arbitration under the National Access Regime

Section 44X of the *Competition and Consumer Act 2010* (Cwlth) sets out matters that the ACCC must take into account when arbitrating a dispute over an infrastructure service that has been declared.

The Commission must take the following matters into account in making a final determination:

- (aa) the objects of this Part;
 - (a) the legitimate business interests of the provider, and the provider's investment in the facility;
 - (b) the public interest, including the public interest in having competition in markets (whether or not in Australia);
 - (c) the interests of all persons who have rights to use the service;
 - (d) the direct costs of providing access to the service;
 - (e) the value to the provider of extensions whose cost is borne by someone else;
 - (ea) the value to the provider of interconnections to the facility whose cost is borne by someone else;
 - (f) the operational and technical requirements necessary for the safe and reliable operation of the facility;
 - (g) the economically efficient operation of the facility;
 - (h) the pricing principles specified in section 44ZZCA.
- (2) The Commission may take into account any other matters that it thinks are relevant.

Source: *Competition and Consumer Act 2010* (Cwlth).

A4ANZ argued for arbitration to be undertaken by a commercial arbitrator. Rex, however, supported arbitration by the ACCC (sub. DR108). A4ANZ stated that the arbitrator's decision would be binding on prices, but the arbitrator would not be able to require an airport operator to undertake an investment, or to direct it on operational decisions.

... the arbitrator's decision as to prices will be binding but the arbitrator can't be in a position where it says, "I require you to make an investment". (A4ANZ, trans., p. 387)

A4ANZ stated that the general practice under negotiate-arbitrate regimes is to minimise the opportunities for appeal (sub. DR106).

The system that A4ANZ proposed differs from the National Access Regime in two important respects. There would be:

- no equivalent to the declaration process to assess whether arbitration would promote a material increase in competition and the public interest
- no access to merits review or judicial appeal.

Airline participants argued that getting an infrastructure service declared under the National Access Regime is time consuming, costly and uncertain, and that an easier path to arbitration is needed to 'level the playing field' in negotiations with airport operators.

The Commission has a different view. The Australian Government established the declaration criteria to promote competition and the public interest — they are essential regulatory tests to ensure arbitration is available when it would be beneficial to the community, not obstacles to be avoided at the discretion of an airline. The A4ANZ proposal

would impose a negotiate-arbitrate framework on the monitored airports even though the evidence does not support a conclusion that they have exercised their market power to the detriment of the community. It would also apply to airports, such as Gold Coast and Hobart, that do not have market power. There would be no requirement to demonstrate that arbitration would promote competition or the public interest.

The Australian Government has established an airport-specific monitoring regime and has requested periodic Productivity Commission inquiries to assess whether any airports with market power have exercised that market power to the detriment of the community. The Commission operates under broad guidance from the inquiry terms of reference and the *Productivity Commission Act* and, unlike the National Competition Council, does not have to satisfy legislated criteria before recommending government action. It can recommend targeted or broad action, including price regulation or deemed declaration of an airport service under the National Access Regime.

Undermining commercial negotiation

For a negotiate-arbitrate regime to be effective, the arbitrator would have to precisely define the service that the airport would provide and specify the price that it would be permitted to charge. In some cases this could include requiring an airport to undertake investments to achieve the arbitrated level of service. If the determination were binding on price but not on investment or operational matters, the airport would be able to undermine the arbitrated outcome by not delivering on the non-binding aspects.

The Commission is concerned that unrestricted access to arbitration that is binding on airports would distort the parties' incentives to undertake good-faith commercial negotiations. Qantas Group stated that a negotiate-arbitrate framework would give airport operators and airport users incentives to drive towards an outcome that is consistent with the principles for arbitration.

The key reason for driving to arbitration as a final outcome where negotiations fail, is that both parties now know where the negotiation is going to (indistinct). And both players are now driving towards an outcome that can be understood because it's what's fair and reasonable as set out in the arbitration methodology. (Qantas Group, trans., p. 483)

The Commission's concern is that the threat of access to arbitration would change behaviour in ways that could be detrimental for the community as a whole. Harry Bush, previously of the UK Civil Aviation Authority, an economic regulatory body, explained the potential effects of access to arbitration.

I mean, at one level it seems perfectly intuitive. Here are two parties, why not have an arbitration if they disagree. The problem that you run into, and which we run into whenever we try to liberalise arrangements within a regulated framework, is that it's difficult to get the regulator out of the room — and by “regulator” in this context I mean “arbitrator” as well, if that's the ultimate authority. Because the parties will be looking towards what the arbitrator will do, that becomes almost more important. (Bush, trans., p. 166)

Rather than trying to reach a mutually beneficial outcome, airport operators and airport users would negotiate ‘in the shadow’ of arbitration. They would have incentives to try to second guess the arbitrator’s determination. The outcomes of negotiations would be determined by assumptions about the arbitrator’s potential decisions rather than the negotiating parties’ commercial incentives.

Some inquiry participants stated that industry-specific negotiate-arbitrate frameworks apply in other sectors and that arbitration is uncommon. A4ANZ drew heavily on the framework that applies to East Coast gas pipelines in developing its proposal, and noted there has been only one arbitration in the 20 months since those rules came into effect. They asserted that this reduces the relevance of concerns about the effects of the existence of an industry-specific negotiate-arbitrate framework — essentially assuming that if arbitration has not occurred it cannot be having any negative effects. The Commission does not agree. The implementation of an airport-specific arbitration regime that is binding on airport operators would change the incentives and behaviour of negotiating parties in ways that would be detrimental, rather than beneficial, to the community.

Increasing the riskiness of airport investment

Under an airport-specific negotiate-arbitrate framework an airport operator could be subject to arbitration at any time during a negotiation process, at the discretion of airlines. Arbitration would likely include an assessment of the value of airport assets to determine the capital costs that airports could recover from airport users. The arbitrator’s valuation of the asset base, and hence the revenue that airport operators are permitted to earn from those assets, could fluctuate significantly over the life of an asset.

From the perspective of an airport operator, uncertainty about the revenue they would be permitted to earn from investments would increase the riskiness of investment. Airport operators would reduce the level of investment in airport infrastructure unless they are compensated for this extra risk through higher up-front charges or guaranteed future revenues.

There is no obvious way to manage the additional risks to investment an airport operator would face under an airport-specific negotiate-arbitrate model. One potential approach would be for the infrastructure operator to seek upfront approval of investments, as has been the case for some electricity network operators. In the electricity sector this has led to gold plating — overinvestment to increase the regulatory asset base and guaranteed revenue. It can also lead to underinvestment if the regulator makes an error about the necessity of a proposed investment or if up-front approval increases the costs of investment (by increasing the time taken to commence work, for example). Both underinvestment and overinvestment would be detrimental to passengers and the community.

The upfront approval approach is a poor solution to the problem of investment uncertainty. Even this unappealing approach to managing investment risks would not be available in the airport context, unless the negotiate-arbitrate regime incorporated regulation of the airports’ asset bases. Empowering a regulator to set the airports’ regulatory asset base would

undermine the case-by-case approach to arbitration. There is no effective way to manage the risks to airport investment under an airport-specific negotiate-arbitrate system.

The risk of arbitrator error

Airports are complex operations that make long lasting investments in costly, and often common use, infrastructure. Airport operators manage the requirements and preferences of many airlines (47 at Sydney Airport) and recover the costs of investments from those airlines over decades. Each agreement for airfield and terminal services is a package of conditions that is intertwined with the conditions of agreements with other airport users.

An arbitration between an airport and one airport user about a common-user facility would have implications for other users of that facility. The arbitrator would have to take these effects into account, as well as the effects on passengers and the community. The greater the number of affected parties, the higher the risk that the arbitrator would make an error.

Opportunities for anticompetitive conduct

Airlines are competitors and each airline has incentives to make life difficult for the others. Unrestricted access to arbitration would create opportunities for incumbent airlines to engage in anticompetitive conduct, such as using arbitration over a common-user facility to reduce the ability of other airlines to compete. For example, a full-service airline might use arbitration to seek a higher level of common-user service and then have this same service — with the resultant higher price — imposed on low cost carrier competitors. Easy access to arbitration could have negative effects on competition and consumers over the long term.

Advocates of the negotiate-arbitrate proposal suggested that this concern could be addressed by establishing requirements for the arbitrator to consider the effects of any arbitration determination on competition. The National Access Regime limits access to arbitration so that it is only available where it would increase competition. The Commission considers that the National Access Regime acts as a credible threat of consequences for airport operators that exercise their market power by restricting access to airport services and limits the opportunities for airport users to engage in anticompetitive conduct.

An unbalanced system

An airport-specific negotiate-arbitrate system would be inherently unbalanced in favour of airlines. A4ANZ stated that airport operators and airport users would be able to use the negotiate-arbitrate system to achieve negotiated outcomes.

Importantly, A4ANZ is not putting forward this proposal so that only airlines may have access to arbitration. Rather, the principle of the negotiate-arbitrate option proposed by A4ANZ is that in the event that commercial negotiations break down, either party can access arbitration. (sub. 83, p. 21)

A4ANZ stated that arbitration comes with risks to both parties, and that this provides an incentive to negotiate in good faith. The Commission considers that airport operators would face more risks from arbitration than airlines. An arbitrator would be able to compel airports to provide services to airlines at the arbitrated price, but would not be able to compel airlines to use airport services at that price. This leads to an imbalance of risk — if the airline is not satisfied with the arbitrator’s determination, it could change (even at the margin) parts of its operations, including its aircraft types and schedules. If the airport is not satisfied with the outcome, it has no choice — it must provide services at the arbitrated price. The risk for an airline entering arbitration is less than the risk to an airport because the airline has more options after the arbitration is completed.

The imbalance in an airport-specific negotiate-arbitrate regime is a result of the mobility of airline capital and the immobility of airport capital. There is no way to manage the structural imbalance of an airport-specific negotiate-arbitrate system through rules for arbitration. The only approach that can manage these issues is to restrict access to arbitration to circumstances where it is in the interests of the community, such as through the declaration criteria in the National Access Regime.

Effects on passengers and the wider community

Airline participants and A4ANZ claimed that an airport-specific negotiate-arbitrate system would benefit passengers through lower airfares and greater availability of flights (A4ANZ, sub. 44). The Commission considers that the link between arbitration and airfares is tenuous, and that passengers might be worse off compared with the current light-handed approach. The Commission agrees with the ACCC that airlines do not necessarily represent the interests of passengers or the community more broadly.

Furthermore, the ACCC would like to reiterate that airline interests do not necessarily coincide with the interests of the broader community. Airlines naturally care about their own profitability which depends primarily on their position relative to their competitors. Although airlines can be expected to seek a commercial advantage in negotiations with airports they cannot be expected to seek lower prices overall for the benefit of the broader community. (ACCC, sub. DR158, p. 11)

Ticket prices

Airline participants stated that an airport-specific negotiate-arbitrate framework would lead to lower aeronautical charges, and hence lower operating costs for airlines. Airlines have weak incentives to pass through any reduction in aeronautical charges to passengers in the form of lower airfares.

Airfares are set in a market — ultimately they reflect what passengers are willing to pay. Qantas Group acknowledged in its submission following the draft report that increasing aeronautical charges would not lead to higher ticket prices, and the reverse is also true — lower aeronautical charges would not be automatically passed through to lower airfares.

For example, increasing airport charges from \$20 to \$30 on a \$199 airfare shifts \$10 to the airport and leaves an airline \$169 instead of \$179 with no change in demand. In reality, the all-inclusive fare adjusts over time to settle at a new market equilibrium in line with capacity, demand and economic conditions, which has been trending downward over the past 15 years. (sub. DR115, p. 17)

Airlines use price discrimination (charging different prices for the same service) to maximise their revenues and profits. Price discrimination leads to ticket prices that are closer to the value that consumers place on them. Consumers with a higher willingness to pay can select themselves into higher price services (such as business class tickets). People who have a lower willingness to pay can select cheaper tickets (such as economy class tickets or promotional fares). Airlines can match their services to consumers' demands and can increase their profits at the same time.

Airlines that have the ability to price discriminate have little incentive to pass on cost reductions to passengers — their pricing decisions are based on what passengers are willing to pay, not solely on the cost of providing the service. Airlines only benefit from reducing their ticket prices if it leads to people changing their behaviour in ways that increase profits. If an airline already has high rates of capacity utilisation at current ticket prices it has little incentive to reduce airfares, even if airport charges fall.

Contrary to the claim made by the airlines and A4ANZ, airfares could be higher if, for example, anticompetitive behaviour successfully delayed necessary airport investment, and this resulted in congestion.

Connectivity

Airlines and their consultants submitted that a negotiate-arbitrate system could lead to increased 'connectivity'. The theory is that if changes to regulation led to lower aeronautical charges the reduction in an airline's costs 'may lead it to increase its service frequency or increase the number of routes it offers' (Frontier Economics, trans., p. 471).

The link between arbitration and increased connectivity is weak. Aeronautical charges account for a small proportion of airlines' operating costs, and the potential reduction in charges arising from a negotiate-arbitrate framework would be a fraction of that. By way of example, in 2017-18, route navigation and landing fees which includes aeronautical charges, accounted for about 11.8 per cent of Qantas Group's total operating expenditure (Qantas Group 2018). Frontier Economics estimated that introducing an airport-specific negotiate-arbitrate regime would lead to aeronautical charges being reduced by about 20 per cent (A4ANZ, sub. 44, appendix B). The Commission does not regard this estimate as credible, but even if it were, it would amount to a reduction of about 2 per cent of Qantas Group's total operating costs. Other factors, such as changes in fuel prices, would be likely to swamp the potential reduction in aeronautical charges in airlines' route planning.

Few benefits, many risks

An airport-specific negotiate-arbitrate framework could have benefits for airlines, including lower aeronautical charges. However, when the full implications of the proposal are considered, there is significant risk that passengers would be worse off.

The threat of arbitration would impose incentives for airport operators to conduct their commercial negotiations as though the arbitrator was in the room. This quasi regulation could have a chilling effect on investments, leading to a long-term risk of increased congestion and falling quality of service. Incumbent airlines would be able to use the system to stymie investment that would facilitate increased competition, potentially leading to higher airfares.

The National Access Regime incorporates checks and balances to safeguard against the risks of arbitration. The declaration criteria restrict arbitration to services and situations where it would be in the public interest. Access to merits and judicial review provides a further check against excessive use of arbitration. Airline participants have stated that the declaration process is expensive, lengthy and uncertain, but have also acknowledged that declaration of airport infrastructure services is possible. They have not demonstrated why the Australian Government should override the safeguards in the National Access Regime for the special case of airports.

FINDING 9.1 AN AIRPORT-SPECIFIC NEGOTIATE-ARBITRATE REGIME WOULD BE DETRIMENTAL

An airport-specific negotiate-arbitrate regime that bypasses the checks and balances of the National Access Regime would:

- undermine the incentives for genuine commercial negotiation between airport operators and airport users
- increase the risks that airports would face in making investments and distort their incentives to make investments
- create opportunities for incumbent airlines to engage in anticompetitive conduct.

Such a regime would be detrimental to the community as a whole.

9.3 Improving the monitoring regime

Discontinue the second-tier monitoring regime

In the draft report the Commission recommended that the second-tier monitoring regime be discontinued. Some inquiry participants argued that the regime should be retained.

Qantas Group objects to the Commission's Draft Recommendation to discontinue voluntary self-reporting of second-tier airports. We agree with the ACCC submission to the Commission that second-tier airports are likely to have a considerable degree of market power. Although this

reporting does not act as a credible threat, publicly-available information is important for future market power assessments. (Qantas Group, sub. DR115, p. 25)

It is contended that continued reporting can best ensure that the introduction of inappropriate commercial practices are discouraged. (Australian Mayoral Aviation Council, sub. DR95, p. 1)

The information published by airports in the second-tier regime is not required for future assessments of market power. In the draft report the Commission stated that government agencies, industry bodies and other stakeholders do not make use of this information — no party has disputed that conclusion. The second-tier monitoring regime serves no purpose and should be discontinued.

The second-tier monitoring regime was established through a policy statement. There is no legislation or regulation that underpins the regime. The Australian Government can discontinue the regime with minimal cost.

RECOMMENDATION 9.3 **DISCONTINUE SECOND-TIER AIRPORT MONITORING**

The Australian Government should issue a statement that the voluntary self-reporting system for second-tier airports is discontinued.

Improve the evidence base

The Australian Government should take steps to improve the monitoring regime to enable greater scrutiny of airport performance. The Commission has identified two areas where better information is required. First, the relatively high aeronautical charges for international services at Sydney and Brisbane airports could be consistent with the airports exercising their market power, but could also be explained by the costs of providing international services. The monitoring reports do not contain sufficient detail to make that assessment. Second, the Commission identified gaps in the monitoring regime as it applies to car parking and landside access.

The Commission is recommending that airports be required to provide the ACCC with more detailed information, including separate reporting of costs and revenues in relation to:

- aeronautical services for domestic flights and for international flights
- the provision and use of at-terminal and at-distance car parking
- the provision and use of landside access services.

Disaggregated information on aeronautical revenues and costs

International passenger numbers have grown faster than domestic passenger numbers at the monitored airports over the past decade. Airports are providing a different mix of services to airlines and passengers, and the sources of airports' revenues and costs have changed.

Airport charges for international aeronautical services are significantly higher than charges for domestic services — airport operators stated that providing international services is more costly but the Commission cannot verify this because, currently, the ACCC does not publish separate data on the costs or revenues associated with domestic or international services.

The increase in aeronautical revenue per passenger has been driven more by the change in passenger mix than by increased charges, but has been inaccurately reported as evidence that airports have exercised their market power. The Commission is recommending separate reporting of costs and revenues in relation to domestic and international aeronautical services to determine whether charges are the result of an airport exercising its market power, or the higher costs of providing international services.

For the monitored airports this would mean a separate reporting of revenues and costs for international and domestic aeronautical services. Sydney Airport has different aeronautical charges for services to regional New South Wales and other domestic destinations. The monitoring report should include separate information for regional and other domestic services from Sydney Airport.

Airports collect aeronautical charges per passenger and per aircraft and should be able to provide separate information on the revenues from international and domestic services at low cost. Airports indicated that they are able to provide this data to the ACCC (Brisbane Airport, sub. DR109; Sydney Airport, sub. DR112). Some airport operators raised concerns relating to commercial sensitivities (discussed below).

Disaggregated reporting of costs

The Commission's benchmark for whether airports have exercised market power is whether aeronautical charges are consistent with the long-run average costs of providing aeronautical services. As noted in chapter 2, long-run average cost is a conceptual benchmark that cannot be calculated in practice. The main impediment to calculating the long-run average cost of aeronautical services is that the capital and operating costs of common-use infrastructure have to be allocated to either international or domestic services. There is no agreed methodology to allocate these costs, so any allocation would be somewhat arbitrary. For that reason, instead of requiring airports to report the costs of domestic and international aeronautical services the Commission is recommending that the ACCC collect and publish:

- information on operating and capital costs that can be directly attributed international or domestic aeronautical services
- information on all common costs that are related to aeronautical services
- any methodologies that the monitored airports use to allocate costs to domestic and international services.

Airport operators identified some challenges in providing allocated costs to the ACCC.

Cost separation for provision and use of aeronautical services for domestic and international flights using the existing allocation model and methodology would also be very difficult and lack comparability. (Perth Airport, sub. DR114, p. 12)

Currently the regulations require that the accounts provided to the ACCC under the regulations are audited. Depending on the reliability of the approach to cost allocations, this could result in a qualified audit opinion for some of the data reported. (Melbourne Airport, sub. DR107, p. 21)

The Commission recognises that there are challenges in disaggregating the costs of providing aeronautical services. For this reason it is recommending that the changes to the reporting be implemented in time for the 2020-21 monitoring report (which will be published in the first half of 2022). The implementation period is intended to provide adequate time for the ACCC to consult with airports on reporting methodologies.

Managing commercially sensitive information

Airport operators raised concerns that increasing the level of detail on aeronautical revenues and costs could enable airport users to back solve competitors' charges.

The Australian domestic market is made up almost entirely of two airline groups (Qantas Group, Virgin Group). In this operating environment, the publication of domestic revenue information may allow these two airline groups to determine the prices paid by each other (their primary competitor) with relative accuracy. (Melbourne Airport, sub. DR107, p. 20)

From an airport perspective, there are few issues associated with reporting the number of arriving and departing passengers. However, confidentiality issues may arise for airlines where a single airline occupies a terminal or where an airline could be identified through the comparison of data sets. (Perth Airport, sub. DR114, p. 11)

Melbourne Airport noted that the ACCC already manages similar concerns in the preparation of the annual monitoring reports.

Currently, where information is provided to the ACCC by an airport which the airport considers is commercial-in-confidence, the ACCC has the discretion to decide whether or not it will publish that information. While the ACCC has to have regard to the need for commercial confidentiality, it also considers whether the disclosure of that information is necessary in the public interest.

If the proposed changes to the regulations from draft recommendation 10.4 are made, Melbourne Airport considers that the confidentiality provisions outlined above should apply to any additional reporting requirements included in the regulations, and that the ACCC should continue to have discretion over what reporting information is made available to the public. (sub. DR107, p. 21)

Sydney Airport stated:

Sydney Airport would willingly engage with the ACCC to determine the right type and level of detail to be provided and on an updated set of service indicators. (sub. DR112, p. 4)

The Commission agrees that protecting commercially sensitive information is critical to achieving the objective of facilitating commercial negotiations, and has updated its

recommendation to provide safeguards. It is recommending that the ACCC work with airport operators and airport users to identify commercially sensitive information and to develop approaches to reporting that balance the need for disclosure and commercial sensitivity.

The mechanism for improving the monitoring regime

Melbourne Airport stated that the Commission's draft recommendation that the Australian Government amend the Airports Regulations was '... not necessary to achieve the objective of improving the quality of the monitoring regime' (sub. DR107, p. 19). It stated that the ACCC has flexibility to require airport operators to produce information related to the supply of aeronautical services.

The ACCC confirmed that it already collects, but does not publish, some of the information that the Commission is recommending be incorporated into the monitoring reports.

Further breakdown between international and domestic services can increase transparency in airport pricing. In fact, the ACCC calculated separate revenue per passenger for international and domestic aeronautical services using its current monitoring data in the preparation of the 2017-18 airport monitoring report. It decided not to publish this information after a number of airports raised confidentiality concerns. It may revisit this approach for future reports depending on the views of the Productivity Commission in this inquiry. (sub. DR158, p. 18)

The measures that the Commission is recommending would be more likely to be effective if they are codified. In its 2012 report into airport regulation the Commission recommended that the monitoring regime be expanded to include more information on landside access. The Australian Government agreed in principle with the recommendation but opted not to make changes to regulation on the basis that the ACCC already had the power to collect the information. The landside access monitoring has remained patchy and inconsistent. Codifying the changes is a sensible step to increase the likelihood that airport operators will provide the necessary information on a consistent basis.

Car parking and landside access data

The Commission is recommending improvements to the evidence on airport car parking and landside access. In the draft report it recommended that airports be required to provide information on the number of users of at-terminal and at-distance parking, and the number of vehicles that use each landside access service. It also recommended that airports be required to provide information on the charges for landside access services and on the revenues and costs related to the provision of car parking and landside access services.

Some airports indicated that they would be able to provide information on user numbers and revenues for car parking, and on revenues for landside access. Other elements of the draft recommendation could be more challenging to implement. Perth Airport, for example, stated that it does not currently collect information on the number of vehicles that use landside access services (sub. DR114).

Airport participants identified difficulties in providing data on the costs of landside access services to the ACCC. The Australian Airports Association pointed out that:

Ground access operating costs include cleaning, management and maintenance of the forecourt area whilst the capital costs largely relate to pavements, barriers and lighting and of course land. If one considers the area between Terminals 1, 2 and 3 and the multi-deck carpark at Melbourne Airport, it is difficult to see how costs could be allocated between users on anything but an arbitrary basis. Service specific costs are likely to be quite small. (sub. DR94, p. 13)

Brisbane Airport argued that requiring airports to provide methodologies for allocating costs between non-aeronautical services is outside of the scope of the ACCC's monitoring functions (sub. DR109).

The Commission is recommending that airports be required to report cost data for car parking and landside access in the same way as for aeronautical services. Operating and capital costs that can be directly attributed to a service, should be. Common costs should be reported as common costs. If airports have methodologies for allocating common costs to specific services they should provide them to the ACCC. If they do not have such methodologies, they should state that clearly to the ACCC.

Airport operators currently provide information to the ACCC on landside access on a voluntary basis — there is no regulatory requirement for them to do so. The monitoring regime would be more effective if airports were required to provide consistent information on the:

- different modes of landside access and the number of vehicles using each of the landside services
- charges and other terms of access for each type of service
- revenue and costs associated with landside access services.

The Commission is still of the view that it expressed in a recommendation in the 2012 report — that airports should be required to provide information on prices and other terms of access for landside services and that the most effective way to achieve compliance and consistent reporting is through changes to the Airports Regulations.

Collecting more detailed information is justified

The monitored airports would face increased compliance costs from expanded reporting requirements. Brisbane Airport stated:

The cost to BAC of complying with the price and quality of service monitoring regime is around \$200,000 per annum. This estimate covers the cost of undertaking surveys, auditing of the ACCC accounts and staff and overhead costs. (sub. 38, p. 46)

Perth Airport stated:

PAPL estimated in 2011 that its annual compliance cost was around \$250,000. We now estimate it to be \$300,000. It does need to be kept in mind that the bulk of the financial information

provided to the ACCC would in a similar form be required to meet PAPL's reporting obligations under its aviation agreements or to support negotiations. (sub. 51, p. 62)

If the current costs of complying with the monitoring regime are of the order of \$200 000–\$300 000 per airport each year, increasing the information requirements would be expected to increase airports' compliance costs by less than \$200 000 per airport each year. This is material, but not unreasonable given the potential effects on the community of airports exercising their market power. The ACCC would also face increased costs to manage the enhanced monitoring regime.

The Commission's proposed reforms would increase the credibility of the threat against airports that exercise their market power to the detriment of the community in the future. The reforms are necessary and justified. The benefits of increasing the credibility of the threat would outweigh the costs to airports of complying with the enhanced reporting requirements and the costs to the ACCC of administering the regime.

More relevant quality of service monitoring

The Commission is recommending that the ACCC work with airport operators, airport users and the Department of Infrastructure, Transport, Cities and Regional Development to develop an updated set of quality of service indicators. The current set of indicators was determined in 2013 and is overdue for revision to develop a set of indicators that are a better reflection of outcomes that are valued by airport users.

The Australian Government could, through a relatively straightforward change to schedule 2 of the Airports Regulations, amend the set of indicators that the airports are required to provide to the ACCC.

The monitored airports all supported updating the quality of service indicators (Brisbane Airport, sub. DR109; Melbourne Airport sub. DR107; Perth Airport, sub. DR114; Sydney Airport sub. DR112). In submissions to the draft report, airports and airport investors were generally positive about the potential for using indicators in service level agreements as a basis for assessing the quality of airports' services (AAA, sub. 50; AAIG, sub. 20; Brisbane Airport, sub. 38; Melbourne Airport, sub. 33; Perth Airport, sub. 51; Sydney Airport, sub. 53). This could be a relatively cost-effective approach to improving the monitoring of service quality. Sydney Airport stated that 'the compliance costs [of ACCC monitoring] could be moderated if the quality of service reporting aligns with objective measures negotiated with airlines as part of commercial agreements' (sub. 53, p. 99).

RECOMMENDATION 9.4 MORE DETAILED INFORMATION ON AIRPORT PERFORMANCE

The Australian Government should amend Part 7 of the Airports Regulations 1997 (Cwlth) such that, in addition to current requirements, monitored airports are required to provide to the Australian Competition and Consumer Commission (ACCC), for each financial year, statements that:

- show the number of passengers that depart from and arrive at each terminal
- separately show the costs and revenues in relation to the provision and use of aeronautical services for domestic flights and for international flights
- for Sydney Airport, show the costs and revenues in relation to the provision and use of aeronautical services for flights servicing regional New South Wales
- separately show the number of users, costs and revenues in relation to the provision and use of at-terminal and at-distance car parking, and the utilisation rates for each type of parking
- separately show the number of vehicles using different landside services, and the charges (and other terms of access), operating revenues and costs attributed to the provision of each landside service
- report any costs that are allocated to the provision of specific services, including: international and domestic aeronautical services; at-terminal and at-distance parking; and landside access services
- report the methodologies that they use to allocate costs to specific services.

The Australian Government should direct the ACCC to:

- publish annual monitoring reports
- publish the methodologies the monitored airports use to allocate costs across different services
- publish a database of the information the airports provide
- consult with airports and airlines to determine whether any of the information they provide is commercially sensitive and to develop approaches to reporting that balance disclosure with the need to protect sensitive information.

The Australian Government should implement these changes in time for the 2020-21 monitoring report.

RECOMMENDATION 9.5 IMPROVING QUALITY OF SERVICE MONITORING

The Australian Competition and Consumer Commission (ACCC) should, within 12 months, provide advice to the Australian Government on an updated set of quality of service indicators, in consultation with airports, airlines, other airport users and the Department of Infrastructure, Transport, Cities and Regional Development.

Once the ACCC has developed its recommended set, the Australian Government should amend schedule 2 of the Airports Regulations 1997 (Cwlth) to codify the updated set of indicators.

Other ways to monitor airport performance

The Commission considered other approaches to airport monitoring, including benchmarks, the use of record keeping rules and the New Zealand information disclosure regime.

Benchmarks for increased regulation

Some participants suggested that the Productivity Commission or the ACCC should specify benchmarks or guidance on financial or other outcomes that would lead to increased regulation of airports (A4ANZ, sub. 44; Qantas Group, sub. DR115). The Commission does not agree that benchmarks are necessary to determine whether an airport has exercised its market power. Nor does it agree with establishing ‘triggers’ that would automatically lead to increased regulation.

Indicators of airports’ operational and financial performance, such as revenues, costs and returns on assets vary over time depending on economic and investment cycles. An indicator might be consistent with the exercise of market power for a time (as might be the case with aeronautical charges for international services at Brisbane and Sydney airports), but might be normal over a longer period. Even if one indicator is persistently outside the normal range, the airport’s performance as a whole might show that it has not exercised its market power to the detriment of the community. Setting a benchmark or trigger for additional regulation based on a small number of indicators could lead to unnecessary interventions in cases where airports have not necessarily exercised their market power.

Rigid benchmarks could be exploited by airports operating up to, or gaming, those constraints. For example, Qantas Group recommended establishing a regulatory benchmark cost of capital for airports (sub. DR115). In other industries, such as electricity networks, setting a regulated cost of capital had the undesirable effect of incentivising gold plating. Setting a benchmark cost of capital for airports could create similar incentives for airports to make inefficient expansions in their asset bases.

ACCC record keeping rules

The ACCC proposed that the Australian Government grant it the power to make record keeping rules.

One option for addressing the issue of information asymmetry is to provide the ACCC with the ability to make rules about what type of information the airports must keep and disclose. This can be implemented by giving the ACCC the power to make record keeping rules (RKR) for the monitored airports similar to the arrangement in telecommunications. This could be applied by amending the Airports Act. (sub. 59, p. 35)

The ACCC has the authority to make record keeping rules in telecommunications (under section 151BU of the CCA) (box 9.2) and for Australia Post (under the *Australian Postal Corporation Act 1989* (Cwlth)).

Using record keeping rules to update the monitoring regime would have positive features.

- This mechanism would provide the ACCC with discretion to determine the information that it needs to effectively monitor the airports and to adjust the rules if new requirements emerge.
- Record keeping rules can be established through a transparent public process. In the telecommunications sector the ACCC has conducted public inquiries when it has proposed changes to record keeping rules and has received submissions from interested parties.
- The ACCC stated that ‘once established, the ongoing administration costs of an enhanced disclosure regime are unlikely to be over burdensome’ (sub. 59, p. 35) and that ‘simply replicating the existing reporting obligations in an RKR [record keeping rule] would be relatively simple and not costly’ (sub. DR158, p. 20).

The Commission might consider recommending record keeping rules in the future. At this stage the proportionate response to the airports’ behaviour is to enhance the annual financial and quality of service monitoring. This could be achieved through straightforward amendments to the Airports Regulations.

Box 9.2 Record keeping rules — an example from telecommunications

Section 151BU of the *Competition and Consumer Act 2010* (Cwlth) gives the Australian Competition and Consumer Commission (ACCC) the power to make rules that require telecommunications carriers to keep and retain records. There are currently several record keeping rules for the telecommunications industry. One rule requires Telstra to keep records that the ACCC uses in its building block model approach to determining prices for certain fixed line telecommunications services. Telstra is required to keep and provide the ACCC with information on:

- the usage of various service types
- the historical cost of certain services
- forecasts of operating expenditure, capital expenditure, demand for various service types and asset lives.

Source: ACCC (2013c).

The New Zealand model of airport economic regulation

Some inquiry participants suggested that the Commission examine the New Zealand regime for economic regulation of airports. The New Zealand Commerce Commission (NZCC) is responsible for regulating three New Zealand airports that are specified in the *Airport Authorities Act 1966* (NZ) as having market power (Auckland, Wellington and Christchurch). The New Zealand regime involves information disclosure and assessment by the regulator.

- Regulated airports disclose their financial performance, quality of services and facilities, capacity utilisation indicators and capital investment each year.

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- At least every five years, regulated airports are required to disclose information on the methodology for pricing and targeted returns.
 - The NZCC sets methodological requirements around the information collected and disclosed. Methodological requirements set out how airports must calculate aspects of their annual disclosures (for example, how assets are valued for regulatory disclosures) and other aspects of the regulatory regime (for example, how the regulator estimates the industry wide cost of capital for monitoring purposes).
 - The NZCC assesses the disclosed information and the effectiveness of regulation for each regulated airport.
 - Legislation sets out a mechanism for further action if assessment reveals an adverse performance outcome.

The rules for information disclosure are different to those under the Australian approach, and some inquiry participants suggested that the New Zealand approach is more informative.

One of the key limitations of the current monitoring regime is that, despite the major Australian airports being highly profitable compared with other airports and sectors, the ACCC cannot be conclusive about whether the airports are making excessive profits. In contrast, the New Zealand Commerce Commission is able to conduct more conclusive reviews of prices charged by the major airports because it has been able to implement an extensive set of rules regarding matters such as how the major airports value their assets, calculate depreciation, and allocate costs. (ACCC, sub. 59, p. 4)

... the New Zealand Commerce Commission gets very detailed information, even more detailed and more based on economic principles that proposed in the PC draft report. So the New Zealand Commerce Commission is in a position to identify whether airports are sort of creating excess profits. It also evaluates performance. It gets quite a number of different measures, not just profits, you know, innovation and things like that. (Arblaster, trans., p. 588)

Some of the elements of recommendation 9.4 would bring the Australian monitoring regime closer to the New Zealand regime, but the Commission is not recommending the New Zealand approach. The current monitoring regime has been effective as part of a regulatory regime to prevent airports from exercising their market power to the detriment of the community. As the ACCC observed, moving to a system similar to the New Zealand regime would be costly.

An approach similar to the New Zealand regime is likely to be quite intrusive and costly to set up. It initially took the NZCC two years to set up its input methodologies, and three years for associated court appeals. The complexity of the process is evident by the length of documents: over 1000 pages for the NZCC reasons document, court records of 50,000 pages, and 657 pages for the merits appeal decision. Therefore it is important to balance the potential benefit of this approach with its associated costs when assessing its merits. (ACCC, sub. 59, pp. 41–42)

The Commission's view is that the balance of benefits and costs does not favour implementing a totally new approach to monitoring.

10 Regional airports and land transport links

Key points

- Regional airports, the majority of which are owned and operated by local councils, provide important services to communities, but are prone to poor decision making and governance.
- State and Territory Governments should improve the capability of council-operated regional airports to enable operators to better manage airport assets.
 - The WA Department of Transport has developed a framework that includes guidance on how to: improve airports' engagement with airlines; and appropriately determine future demand for air transport services, and the charges needed to maintain and replace airport assets.
 - The Commission considers that the Framework developed by the WA Department of Transport would help build capability in local councils to better manage airport infrastructure. It should be reviewed and, pending the findings of that review, be adapted and rolled out by governments in other jurisdictions.
- The criteria used by the Australian, State and Territory Governments to assess the merit of financial support for many infrastructure projects at regional airports can lack rigour and lead to unwarranted investments.
 - Government funding of infrastructure investments at regional airports should be subject to transparent processes that include a published independent assessment of the proposed project and consultation with airport users, to improve decision making and investment outcomes.
 - Regional airports should be required to demonstrate sound asset management practices — using a framework with similar principles to the Framework developed by the WA Department of Transport — when seeking government funding support for infrastructure investments.
- Each level of government has an important role in the planning and provision of transport infrastructure and services that link an airport to population centres. The operators of the monitored airports are working with governments to improve land transport links to the airports. These arrangements appear to be working well.
- Clauses in public–private contracts for the provision of public transport services to Sydney and Brisbane airports have led to poor outcomes for passengers and the wider community.
 - Government decisions about the provision of public transport infrastructure at airports (through public–private partnerships) should be made in the public interest. This includes governments ensuring that there are no anticompetitive clauses in public–private contracts that restrict current or future rival transport services, or any other provisions that would lead to poor outcomes for passengers and the wider community.

The focus of the inquiry is largely on the economic regulation of airport services at Sydney, Melbourne, Brisbane and Perth airports (the monitored airports). The Commission has, however, also examined issues relating to regional airports and land transport links at the monitored airports.

- Airports in regional areas provide important services to communities. Inquiry participants raised concerns about the efficient operation of regional airports. These concerns are considered in section 10.1.
- The terms of reference direct the Commission to consider whether arrangements for the planning and operation of land transport linkages to airports in Australia's major cities are effective. This is discussed in section 10.2.

10.1 Regional airports

Regional airports are operated under a variety of ownership and management structures. The vast majority of regional airports are owned and operated by local councils. Some large regional airports that have regular public transport services, such as Cairns and Mackay airports, are leased by State Governments to private companies, while others, such as Mildura and Gladstone, are corporatised.

Participants' concerns relating to regional airports included lack of transparency in financial reporting and asset management practices, unnecessary infrastructure upgrades, government funding for regional airport infrastructure and the cost burden of airport security.

Concerns raised by participants warrant consideration because they could affect the efficient operation of regional airports, but it is unlikely that they reflect the exercise of market power. Many of Australia's regional airports are serviced by, at most, a single regular public transport airline and have relatively few passengers each year. Low demand for services means that operators of many regional airports are unable to cover their operating costs. Regional airports that cannot cover their operating costs do not have market power, let alone the ability to exercise it — the aeronautical charges needed to cover the cost of running these airports are higher than what passengers and airlines are willing to pay (chapter 3). Some regional airports are profitable and will have market power, but they will be unlikely to be able to exercise it for reasons that include, competition from other airports in tourism destinations and the countervailing power of airlines (chapter 3).

Asset management at regional airports

Airlines and their representative bodies raised concerns about a lack of transparency in financial reporting at council-operated airports. Virgin Australia Group argued that it was

not possible for it to evaluate whether the level of aeronautical charges were justified at some council-operated airports.

In some cases airports may refuse to provide a cost model at all, making it impossible for airlines to assess whether the proposed aeronautical charges are appropriate or excessive. This is often the case with regional airports, including some Council-owned ports. In such cases, airlines have no ability to assess the reasonableness of aeronautical charges. (sub. 54, p. 7)

The Regional Aviation Association of Australia argued that regional airports should be required to provide information on their assets and how they allocate assets to aeronautical and non-aeronautical services (sub. 66).

Airlines questioned the financial asset management practices at some council-operated regional airports. Concerns raised included lack of in-house knowledge and experience at local councils in managing airport infrastructure, and arbitrary revaluations of airport assets, that result in increases in aeronautical charges.

Virgin Australia acknowledges that some smaller airports may have limited resources available for cost modelling and engagement with airlines around key inputs, such [as] asset valuation and the rate of return. Where smaller airports do face these skills/resource constraints, we would support resources being made available to the airport, perhaps through an airport industry association, to enable the airport to more effectively engage with airlines. (Virgin Australia Group, sub. 54, p. 7)

Pricing models can be distorted by the arbitrary revaluation of assets, particularly land. A trend is emerging amongst regional airports to have their assets revalued on a piecemeal basis, often resulting in a figure several times the original valuation, and then on-charging the resulting hefty increases in depreciation. (RAAA, sub. 66, p. 18)

Airlines for Australia and New Zealand (A4ANZ) and Regional Express (Rex) questioned the treatment of government-funded assets in financial reporting.

In one case, a regional airport sought to include assets funded by a government grant into the aeronautical asset base (which would enable a return on an investment it had effectively never made) so that the Council could recover the grant money from airlines and reinvest that money in other community projects. (A4ANZ, sub. 44, p. 28)

... Rex believes that KIC [King Island Council] and other similar councils are completely misguided in how it should be accounting for assets that are gifted by the Federal or State governments. (Rex, sub. 63, p. 13)

In a 2016 review of reporting and compliance burdens on local government in New South Wales, the NSW Independent Pricing and Regulatory Tribunal found that State Government support was needed to assist local councils in undertaking their assigned functions and to build capacity (IPART 2016). The Commission has previously found that the capacity and capability of local governments vary significantly (PC 2008, 2012b, 2014). In the *Transitioning Regional Economies* study, the Commission recommended that State and Territory Governments should help build capacity and capability of decision makers in functional economic regions (box 10.1) (PC 2017b).

Box 10.1 Functional economic regions

Researchers and governments, including in Australia, have developed definitions of regions based on functional economic regions (FERs) (for example, Stimson et al. 2015). The Commission drew on this approach in its *Transitioning Regional Economies* study. The FER method reflects that geographic areas are linked by the interactions between people across neighbouring areas, including that:

- people travel between geographic areas for work and to access goods and services
- businesses hire workers, purchase services and sell their products across geographic areas
- governments and people interact economically, socially and culturally.

FERs are usually based around a centre, such as a town or city, with which the region is strongly economically interdependent.

FERs provide a suitable approach for thinking about development and planning because they consider the similarities and linkages between geographic areas, acknowledging that they operate in an integrated way. Decision making solely based on administrative boundaries, such as local government areas, can lead to inadequate consideration of the geographic systems the local governments operate within.

Source: PC (2017b).

State and Territory Governments should improve the capability of council-operated regional airports to enable operators to better manage airport assets. The WA Department of Transport recognised the need to improve the capability of council-operated airports and has developed the Strategic Airport Assets and Financial Management Framework (the WA Framework) (WA DoT 2017) (box 10.2). The aim of the WA Framework is to provide a standardised template for asset management at council-operated regional airports, including guidance on how to improve airports' engagement with airlines and how to determine the charges required to maintain and replace assets. The WA Department of Transport stated that, from July 2019, the WA Framework will be a requirement when seeking WA Government funding support and will aid in assessing an airport's asset base and financial circumstances (WA DoT 2018a).

The Commission found in its draft report that the WA Framework would help build capability in local councils to better manage airport infrastructure. Airlines and other participants supported the Commission's draft recommendation for governments to review, adapt and roll out the WA Framework to other jurisdictions (A4ANZ, sub. DR106; Qantas, sub. DR115; Regional Airport Users' Action Group and Geoff J Breust, sub. DR103). Rex for example, said that 'an Airport Management Framework (as per the WA example) will be an important tool for Federal and State Governments in the important decision making process to allocate taxpayer funds to regional airports' (sub. DR108, p. 9). The Rural and Regional Affairs and Transport References Committee also supported the draft recommendation in its report on the *Operation, regulation and funding of air route service delivery to rural, regional and remote communities* inquiry (RRATRC 2019). Conversely, airport representatives argued that not all council-owned and -operated regional airports

should be required to implement the WA Framework because some are likely to have fit-for-purpose asset management frameworks already in place (AAA, sub. DR94).

The Commission remains of the view that the WA Framework should be reviewed and, pending the findings of that review, be adapted and rolled out by governments in other jurisdictions. Airports that have sound asset management frameworks in place — with similar principles to the WA Framework — should not be required to adopt the WA Framework.

Box 10.2 Strategic Airport Assets and Financial Management Framework

The WA Department of Transport, in consultation with the Australian Airports Association, airlines and Local Governments, has developed the Strategic Airport Assets and Financial Management Framework (the WA Framework) for regional airports with regular public transport services in Western Australia. The WA Framework consists of a template that regional airports can apply to engage with stakeholders, independently determine future air service demand, understand and manage their asset base, and determine operating costs and appropriate pricing strategies. The key components of the WA Framework are outlined below.

- The airport user engagement plan outlines how airport operators engage with airlines and other stakeholders when considering future infrastructure investments and airport charges.
- The air services demand model determines future aeronautical demand such as passenger numbers, aircraft movements and aircraft type. The model includes low, medium and high estimates of demand.
- The aeronautical asset management plan provides a long-term approach to the efficient management of airport assets to meet current and future demand for airport services. The asset management plan outlines:
 - non-asset options for dealing with demand pressures
 - methods of depreciating aeronautical assets, such as runways and terminals
 - how aeronautical assets partially or fully funded using government grants should be treated in financial reports.
- The scenario testing module gives airport operators the ability to test proposed airport investments to determine the effect investments will have on the financial sustainability of the airport and on future airport charges.
- The aeronautical funding management plan justifies the funding strategy required by regional airport operators to support current and future operations and asset management. The airport funding strategy varies according to whether the airport is a subsidised community, full-cost-recovery or commercial airport.

As part of the initial stage, the WA Framework was rolled out to five regional airports in Western Australia — Geraldton, Kununurra, Newman, Carnarvon and Albany airports.

Sources: WA Department of Transport (2017; 2018b).

RECOMMENDATION 10.1 ASSET MANAGEMENT AT REGIONAL AIRPORTS

The Australian Government should review the efficacy of the Western Australian Strategic Airport Assets and Financial Management Framework in 2022, three years after its implementation in Western Australia. The review should be conducted in consultation with State, Territory and Local Governments.

Pending the findings of that review, the Western Australian Strategic Airport Assets and Financial Management Framework should be adapted and rolled out by governments in other jurisdictions with the objective of providing a template for sound asset management practices and greater transparency when determining airport charges at regional airports.

A build-it-and-they-will-come approach to infrastructure upgrades

Participants argued that many regional airport operators make unnecessary investments in infrastructure, and that this contributes to higher aeronautical charges. One of the reasons for poor investment decisions is inadequate consultation with airport users (RAAA, sub. 66; Regional Airport Users' Action Group and Geoff J Breust, sub. 9). A4ANZ for example, stated:

... a recent survey by the Australian Airports Association confirmed that fewer than half of regional airports (~ 45%) consult with airlines prior to “major capital works entailing increased airport charges”, with the concept of genuine, open consultation and co-design representing exceptional, rather than usual behaviour in Australia’s airports. Further illustrating the lack of transparency and consultation, the same survey notes that increased charges are often levied with little forewarning, with an overwhelming majority (86%) of regional airports admitting that they only give airlines three to six months’ notice of changes to airport charges, often after tickets have already been sold. (sub. 44, p. 13)

The Australian Airports Association (AAA) offered a different explanation.

Overall, communications with the airlines appear to be robust with 47% of airports discussing charges periodically with airlines (without detailed modelling) while 32% provide more detailed modelling and cost and revenue data. Only 22% set charges without detailed discussion. The AAA believes that the lack of discussion largely reflects no pricing activity by the airport concerned or disinterest on the part of airport users. (sub. 50, p. 36)

Others, including the Regional Airport Users' Action Group and Geoff J Breust, stated that some regional airport infrastructure upgrades are driven by politics and regional development objectives. These objectives include, for example, facilitating international tourism by upgrading runway and terminal capacity to cater for aircraft larger than any airline is proposing to fly at that destination.

Airport passenger terminal upgrades and critical infrastructure upgrades for larger capacity and jet aircraft on a “...build it and they will come basis...” without effective consultation with users and proper business case development reflect the authoritarian approach. Upgrades at

Dubbo, Orange, Kingscote and Mildura are examples. Proposed upgrades at Mount Gambier, Merimbula, Port Lincoln and Kingscote (the latter two for direct interstate operations) are also examples. One suggests such upgrade decisions are the result of local politics or empire building on the part of the local bureaucracy rather than effective investment decisions. The engagement of consultants to prepare improbable Master Plans has not assisted the process. (sub. 9, p. 6)

Rex argued that a build-it-and-they-will-come approach to infrastructure upgrades can put existing air transport services at risk due to the subsequent burden of the cost of depreciation.

The ‘build it and they will come’ approach in particular comes with extremely high risk. Infrastructural developments of regional airports should be undertaken with a phased and rational approach. Questions do need to be asked when some regional airports embark on plans to accommodate A320 and 737 jets when the regional airport’s current and forecast demand can be readily accommodated with turbo prop aircraft that don’t require any upgrades. When the grand plans fail to come to fruition, the existing service may be jeopardised as it has to carry the burden of the unnecessary but substantial depreciation. (sub. 63, p. 5)

The AAA refuted statements that regional airports are undertaking unwarranted infrastructure upgrades (sub. 50). It argued that terminals at many regional airports are old and require replacing and should have a basic level of amenity, for example, air conditioning and adequate seating for passengers. The AAA further argued that runway expansions to accommodate larger aircraft can be prudent given the uncertainty as to the type of aircraft that airlines might operate in the future. It stated, however, that the prudence of such airport expansions should take into account several factors including the benefits of delaying the investment until at least some uncertainty is resolved and the benefits that might accrue from increased competition resulting from increased capacity (AAA, sub. DR94).

Infrastructure expansions that lead to temporary overcapacity are not necessarily inefficient investments — airport infrastructure is lumpy and new capacity might not be fully utilised from day one but could be justified over the longer term. Further, the outcomes of airport investments are subject to uncertainty and risk. Investments that appear excessive in hindsight might have been based on reasonable assumptions at the time that did not come to fruition (chapter 5).

Government funding for regional airport infrastructure

The Australian, State and Territory Governments provide funding to regional airports to support various projects, often infrastructure upgrades, to promote regional development objectives. Some of the programs require operators of regional airports to contribute at least 50 per cent of the project cost. Government programs aimed at supporting regional airport infrastructure outline criteria against which applications are assessed. Participants submitted that the criteria used to assess the merit of eligible projects can lack rigour and can also lead to infrastructure investments that are unwarranted.

... it is understood neither the Commonwealth nor State Governments undertake independent audits of projects undertaken with grant funding. While grant receivers are required to provide a final report, there is no independent validation of the project scope, completion and funding

acquittal. Such action would be a further efficiency driver for airport infrastructure relevance and actual facilitation. (Regional Airport Users' Action Group and Geoff J Breust, sub. 9, p. 9)

Participants outlined several examples of what they consider to be questionable government-funded infrastructure upgrades at regional airports (A4ANZ, sub. 44; RAAA, sub. 66; Regional Airport Users' Action Group and Geoff J Breust, sub. 9; Rex, sub. 63). Rex gave the example of Kangaroo Island Airport.

The justification for the major redevelopment [at Kangaroo Island Airport] was based on a council produced report published in 2013 where council projected significant increased passenger throughput directly from the east coast of Australia ... What was most concerning to Rex in relation to the council developed business case for the multi-million dollar, taxpayer funded airport redevelopment project (May-2013) was that just 1 year earlier (May-2012), a previously commissioned report for Kangaroo Island Futures Authority Advisory Board, cited that "there is certainly no evident business case for an upgrade of the airport" ... The approach undertaken by Kangaroo Island Council and supported by both State and Federal Government, demonstrates a completely economically irresponsible and misguided approach to infrastructure spending. Some \$21 million has now been spent on Kangaroo Island Airport with no guarantee of any airline commencing new services. (sub. 63, p. 10)

Unjustified infrastructure upgrades funded by governments could lead to the perverse outcome of a loss of air transport services to communities if they result in increased aeronautical charges that airlines (and, by extension, passengers) are not willing to pay. The Commission notes, however, that air transport services have important community benefits and many regional airports, particularly the smaller ones, are unable to cover operating costs, much less fund essential infrastructure upgrades (chapter 3). In these cases, Australian, State and Territory Government funding support for essential infrastructure works at regional airports may be warranted, but the proposed investment should be subject to an independent assessment, before funding is committed, to ensure it generates benefits to the community.

Concerns about when and where governments provide funding support for infrastructure investments were also raised in the Commission's *Public Infrastructure* inquiry (PC 2014), *Transitioning Regional Economies* study (PC 2017b) and *National Water Reform* inquiry (PC 2017a). The Commission stands by the principles outlined in its previous work, including that governments use transparent and rigorous processes for selecting projects and the functional economic region approach to assess government support for infrastructure projects (box 10.1).

Airlines and other participants supported the Commission's draft recommendation on government funding of airport infrastructure (A4ANZ, sub. DR106; Regional Airport Users' Action Group and Geoff J Breust, sub. DR103; Rex, sub. DR108). Airport representatives acknowledged the need for transparent processes for funding of airport infrastructure, but argued that the assessment of the proposed project should be appropriate to the scale of fiscal and other risks posed, and should also take into account the social benefits.

... the AAA [Australian Airports Association] is concerned that whilst the approach recommended by the Commission may be appropriate for the assessment of, say, a new regional terminal costing several tens of millions of dollars, it may be disproportionate for the assessment

of relatively small essential aviation infrastructure projects (less than say a few million dollars). (AAA, sub. DR94. p. 14)

The Commission agrees. Assessments of proposed infrastructure should be commensurate with the scale of the project and should consider the social benefits to the region associated with air transport services. Consultation with airport users (to assess willingness to pay) should take place for all infrastructure projects that are likely to lead to higher aeronautical charges, regardless of the size of the project. Regional airports should also be required to demonstrate sound asset management practices, either using the proposed WA Framework, or another framework with similar principles, when seeking government funding support for infrastructure investments. Governments should publicly justify a decision to fund regional airport infrastructure where that decision is made without an independent *ex ante* published analysis.

RECOMMENDATION 10.2 **FUNDING FOR REGIONAL AIRPORT INFRASTRUCTURE**

The Australian, State and Territory Governments should:

- ensure that an independent analysis of proposed government funding of regional airport infrastructure is completed before funding is committed. The analysis should include a public consultation process and assess:
 - the economic and financial viability of proposed infrastructure investment, including the ongoing operational costs
 - whether the project is consistent with the long-term strategy of the region and the airport’s master plan
 - the social and economic benefits and the recipients of those benefits
 - users’ (airlines and communities) willingness to pay for the infrastructure
 - whether the airport operator has in place sound asset management practices
- assess proposed government-funded investments in airport infrastructure using the relevant functional economic region as the basis for decisions, not individual local councils
- monitor and independently evaluate any project that receives funding to assess whether the project outcomes have been achieved. The evaluation report should be published.

The Australian, State and Territory Governments should publish the justification for funding any infrastructure projects that were not supported by independent analysis.

The cost of airport security at regional airports

Inquiry participants raised concerns about the cost burden of airport security at regional airports (box 10.3), particularly in relation to the additional security requirements announced by the Australian Government in 2018 (DoHA 2018). The Commission has previously

identified that the costs and benefits of airport security should be considered in future reviews of the aviation security system (PC 2018).

In 2019 the Rural and Regional Affairs and Transport References Committee examined security services at regional airports (RRATRC 2019). In its inquiry report, the Committee recommended that the Australian Government complete an assessment to determine the ongoing operational, maintenance and staff costs of proposed passenger security enhancements at regional airports. Pending the assessment, the Committee also recommended that the Australian Government consider providing ongoing financial assistance to those regional airports identified in 2018 as requiring enhanced passenger security screening (RRATRC 2019). The Australian Government had not responded to the recommendations when the Commission's report was provided to the Government.

Box 10.3 The cost burden of airport security at regional airports

The Australian Government regulates aviation security through minimum security requirements for airport operators, with the intention that security services are provided at a level that reflects the broader social benefits (chapter 2).

Minimum security requirements can be challenging to manage across airports of different sizes and locations, particularly at regional airports where security costs are a high proportion of total airport operating costs. Some inquiry participants (AAA, sub. 50; Karratha Airport, sub. 12; Regional Airport Users' Action Group and Geoff J Breust, sub. 9, sub. DR103) argued that additional security requirements announced by the Australian Government in 2018 could significantly increase regional airport operating costs. One participant noted that in some cases, the total costs for airport operators could 'potentially be beyond the funding capacity of some smaller airports', despite grant funding provided by the Australian Government to assist with the capital investments required to transition to the new requirements (AAA, sub. 50, p. 101). Airline representatives also acknowledged that regional airports are likely to face difficulties in funding the upgrades to terminals and infrastructure to comply with new security requirements (A4ANZ, sub. DR106).

The costs of airport security are shared between the Australian, State and Territory Governments, airports and passengers (passed on through safety and security charges). Regulatory requirements do not necessarily mean that security services are delivered cost effectively. Fit-for-purpose security regulation should be sufficiently flexible to support operators to achieve minimum security outcomes in an efficient manner (PC 2018).

10.2 Land transport links

Each level of government has an important role in the planning and provision of transport infrastructure and services that link an airport to population centres and the surrounding areas. Participants argued that current land transport planning arrangements are effective, but some expressed concerns about the adequacy of land transport links, and the effect of public-private arrangements on competition between different public transport services in some cities.

Effectiveness of land transport planning arrangements

In 2010, the Australian Government amended parts of the *Airports Act 1996* (Cwlth) relating to master plan requirements. (Master plans are discussed in chapter 1.) These legislative changes aimed to better align airport planning with State, Territory and Local Government planning, with particular attention given to improving transport planning (Airports Amendment Bill 2010 (Cwlth) Explanatory Memorandum). Prior to the legislative changes, there was no requirement for airports to consult with governments on planning issues. Since 2011, Planning Coordination Forums (PCFs) and Community Aviation Consultation Groups (CACGs) have been established for the federally leased airports. The aim of PCFs and CACGs is to bring together the three levels of government and community representatives on issues associated with master plans (DITCRD 2019a).

The Commission recommended in its 2011 inquiry that the effectiveness of the 2010 legislative changes to master plan requirements should be reviewed in 2015. In 2015, the Australian Government commissioned an independent review of the CACGs and PCFs. The review found the CACGs and PCFs were generally well supported by participants and effective in meeting their objectives. The review also found that a one-size-fits-all approach to consultation did not work for all arrangements and recommended more flexibility in airports' approaches to community consultation, particularly at smaller airports (DITCRD 2019a). In late 2016, the Australian Government broadened expectations relating to federally leased airports' consultative arrangements — airports are now expected to tailor their consultation activities to suit the specific needs of their stakeholders (DITCRD 2019a).

Airport operators highlighted that land transport planning requires consistent and effective coordination between all levels of government, and were generally satisfied with current arrangements (Adelaide Airport, sub. 32; Brisbane Airport, sub. 38; Melbourne Airport, sub. 33; Perth Airport, sub. 51; Sydney Airport, sub. 53). For example, the AAA stated:

The AAA understands that these reforms [consultative arrangements with state and local government authorities to improve the planning and development of ground transport linkages to airports] have led to better information exchange, improved planning outcomes and more efficient project delivery.

The benefits of these reforms can be seen from the delivery of the Gateway WA project at Perth Airport and the T4 Transport Hub at Melbourne Airport, as well as current projects underway at a range of airports, including around the domestic terminal precinct at Sydney Airport and the development of the Perth–Forrestfield rail link. (sub. 50, p. 101)

Similarly, the Department of Infrastructure, Regional Development and Cities stated:

While the varying interests and legislative frameworks in which each party operates make for complex negotiations, there are numerous examples of effective outcomes being achieved. Airports have demonstrated they are willing to collaborate with federal, state, territory and local governments to address ground transport issues, in and around airports, as they recognise the mutual benefits. (sub. 40, p. 23)

Adequacy of land transport links

Some participants raised issues in regards to congestion and the adequacy of land transport links to Sydney Airport (Sydney Airport, sub. 53; SBC, sub. 17). Sydney Airport is located near key arterial roads used by a large share of the commuter and long distance road traffic, and road freighters transporting containers to and from Port Botany, south east of Sydney Airport. About 59 per cent of passengers use a car when accessing Sydney Airport (chapter 6). Congestion around Sydney Airport is not new. In 2011, the Commission found that of all Australian airports, congestion was most severe in and around Sydney Airport.

The NSW Government and Sydney Airport have worked together to improve capacity of the roads within and around the airport precinct (Sydney Airport, sub. 53). Since 2011, the NSW Government has increased the number of train services that run to and from Sydney Airport and proposed technology improvements in 2018 (NSW Government 2018, sub. 62; Sydney Airport, sub. 53). The Government said that the proposed technology improvements will benefit Sydney Airport because trains will run at a higher frequency (every four minutes, instead of every six). Other commitments from the NSW Government include: planning for new suburban bus routes to the airport and road linkages between the motorways and airport terminals; and updated roads, and cycling and walking paths that connect to the Sydney Airport precinct (NSW Government, sub. 62).

Participants have not raised significant issues relating to the adequacy of land transport links at the other monitored airports. The Airport Bicycle User Group, a group that represents bicycle users at Brisbane Airport, argued that there is inadequate access to some areas of Brisbane Airport, such as the General Aviation Precinct, for employees that cycle or walk to work (sub. 88; sub. DR151). Brisbane Airport has a 15 km cycle network within the airport precinct, with a mix of shared pedestrian and cycle paths that connect Brisbane Airport to the city of Brisbane. It also has shared roadways that permit cycling (Brisbane Airport 2017, 2019c). The lack of bicycle and pedestrian access to some areas of the airport could be due to safety concerns (Minister for Infrastructure and Transport 2017).

In Melbourne, Brisbane and Perth, several projects aimed at improving public transport access to airports have commenced, have been proposed or are being explored (box 10.4).

Box 10.4 Projects to improve public transport to airports in Melbourne, Brisbane and Perth

In 2018, the Australian and Victorian Governments announced that a train service to Melbourne Airport would be built, with construction planned to start by 2022. The construction of the Melbourne Airport rail line is supported by inquiry participants (Melbourne Airport, sub. 33; Qantas Group, sub. 48).

In late 2017, Brisbane Airport, Brisbane City Council and the Queensland Department of Transport and Main Roads, jointly funded the Brisbane Airport Access Study. The aim of the study was to identify opportunities to increase public transport offerings at the airport. Brisbane Airport stated that several initiatives were identified and that the parties would continue to work on opportunities to extend public transport offerings to the airport. The airport stated that it is working with the Queensland Government and Queensland Rail to include a third railway station at the airport (Brisbane Airport, sub. 38).

The Australian and Western Australian Governments have jointly funded the Forrestfield-Airport Rail Project that will connect Perth Airport to the CBD and to the eastern suburbs of Perth. Currently under construction, the rail line is expected to open in 2021 and will have a central train station adjacent to Terminal 1 (Western Australian Government 2018; Perth Airport, sub. 51). Perth Airport stated that congestion issues have improved since 2011.

Congestion issues on arterial roads in the vicinity of Perth Airport have decreased significantly since the Commission's last Inquiry thanks to the \$1 billion Gateway road project and the Great Eastern Highway widening project. Congestion during the traditional morning and afternoon commuter peaks is not unique to the roads in the vicinity of the airport, nor to Perth. There is no material congestion on the roads near Perth Airport at times other than the morning and afternoon metropolitan peaks, which are not the peak operating periods of Perth Airport. (sub. 51, p. 7)

Effects of private sector involvement in public transport services

The private sector plays a role in the provision of some transport infrastructure and services that link an airport to population centres. For example, in some major cities around Australia, private companies operate the passenger rail service, and/or key aspects of the road network, that connect the airport with the city. Private sector involvement in infrastructure can have benefits, such as improving the cost and availability of new infrastructure. There are, however, challenges in involving the private sector, including aligning the private firms' incentives with the public interest (PC 2014).

Public transport services to and from Sydney and Brisbane airports are constrained because contracts between State governments and private companies that operate rail services in the two cities contain:

- restrictions on rival services, such as the ability to operate public buses to airport terminals (Sydney and Brisbane)
- high station access fees (Sydney) (box 10.5).

Box 10.5 Airport rail links at Sydney and Brisbane

Sydney Airport rail link

The Airport Link line consists of four underground stations — Green Square, Mascot, and the Domestic and International Terminals — connecting to the CBD along the East Hills Line. The four stations are owned and operated under a 30 year contract between the NSW Government and a private operator, Airport Link Company (Airport Link), that expires in 2030. The NSW Government owns the tunnels, tracks and signalling systems for the Airport Link line.

Airport Link sets a station access fee for entry and exit from the domestic and international terminal stations, which passengers pay in addition to the Sydney train fare component. As of June 2019, the station usage fee was \$14.30 for an adult, one way.

According to revenue sharing arrangements in the contract between the NSW Government and Airport Link, the NSW Government has received approximately 50 per cent of the revenue generated from the station access fee since early 2013 and 85 per cent since late 2014. Any government policy or decision to alter the terms of the station access fee, such as its reduction or removal, requires the NSW Government to enter into commercial negotiations with Airport Link.

Airport Link removed the station access fees at Mascot and Green Square in 2011. The NSW Government has been compensating Airport Link for the removal of the access fees at these stations. The station access fee at the two airport stations is still in place.

Public bus services to Sydney Airport are currently very limited. The bus from Burwood to Bondi Junction is the only public bus route that services the terminals. There is a 'no compete' clause in the contract between the NSW Government and Airport Link that enables Airport Link to seek compensation from the NSW Government if public bus services between the Sydney CBD and the airport are introduced.

Brisbane Airport rail link

The Brisbane Airport Rail Link is an 8.5 km, elevated railway between Eagle Junction and the domestic and international airport terminal stations. It operates under a contract between the Queensland Government and Airtrain Citylink Limited (Airtrain) that expires in 2036. Airtrain owns the spur lines to the airport stations.

The contract between the Queensland Government and Airtrain includes restrictions on the introduction of other public transport services to Brisbane Airport that would compete with Airtrain. In a submission to the Commission's 2011 inquiry into airport services, Brisbane City Council stated that it was not permitted to operate a bus service within 1 km of Airtrain stations, precluding bus services directly to the domestic and international terminals. Brisbane City Council currently operates one bus route to Brisbane Airport's Skygate centre, a retail complex located about 5 km from the airport terminals. Brisbane Airport provides a free bus between Skygate and the terminals.

Sources: Aroozoo (2017); Brisbane Airport (2014); NSW Legislative Council (2014); PC (2012a); TTF (2013, 2016).

Several inquiry participants argued that station access fees for train stations at Sydney Airport discourage the use of public transport to and from Sydney Airport, and should be removed (Inner West Council, sub. DR96; Patrinos, sub. DR147; Sutherland Shire Council, sub. DR155). Sydney Airport and the Sydney Business Chamber stated that they have advocated for a decrease in the station access fee to encourage airport users to travel to the

airport by train (sub. 53 and sub. 17). In 2017, 24 per cent of airport passengers used the train service at Sydney Airport (chapter 6).

In 2013, the NSW General Purpose Standing Committee conducted an inquiry into removing or reducing station access fees at Sydney Airport. The Committee found that the access fee was a disincentive to the use of train services and made a number of recommendations, including that the NSW Government investigate:

- the removal of anticompetitive clauses in the contract with Airport Link relating to the provision of rival public transport services (such as buses) from the city of Sydney to Sydney Airport
- new bus routes to Sydney Airport
- the feasibility of removing or providing a discount on the station access fee for some groups of airport users (for example, workers and families travelling together) (NSW Legislative Council 2014).

In 2014, the NSW Government responded to these recommendations and stated that it had no intention to negotiate with Airport Link to remove clauses from the contract relating to the provision of rival public transport services, and that reducing or abolishing the station access fee was not part of NSW Government policy at that time (NSW Government 2014). The NSW Government did, however, enter into an agreement with Airport Link in 2014 to place a weekly cap on the station access fee and has stated in its submission to this inquiry that it is currently progressing planning for new suburban bus routes to the airport (NSW Government 2014, sub. 62).

Brisbane Airport stated that it has worked with the Queensland Government to improve public transport services to Brisbane Airport (sub. 38). In 2013, about 8 per cent of airport users at Brisbane Airport used the train (Brisbane Airport 2014, p. 239). The Commission is not aware of any recent changes to arrangements that would improve public transport services to Brisbane Airport, such as the introduction of bus routes to the terminals.

Public–private arrangements in public transport services that restrict competition to support the profitability of the private provider result in poor outcomes for passengers and the wider community.

The Commission examined the provision of major public infrastructure in its *Public Infrastructure* inquiry (PC 2014). Consistent with principles outlined in that inquiry, the Commission considers that future government decisions around the provision of public transport infrastructure at airports (including through public–private partnerships) should be made in the public interest. Governments should ensure that there are no anticompetitive clauses in public–private contracts that restrict current or future rival transport services, or any other provisions that would lead to inefficient and poor outcomes for passengers and the wider community.

A Public Consultation

The Commission has actively encouraged public participation in this inquiry. This appendix outlines the consultation process.

- An advertisement was placed in *The Australian* newspaper and a circular was sent to identified interested parties following receipt of the terms of reference on 22 June 2018.
- An issues paper was released on 9 July 2018 to assist those wishing to make a written submission to the inquiry. The Commission received 88 submissions prior to the release of this draft report. A draft inquiry report was released on 6 February 2019 and 97 submissions were subsequently received: a total of 185 submissions were received throughout the inquiry (table A.1). These submissions are available online at www.pc.gov.au/inquiries/completed/airports-2019/submissions.
- Consultations were held with representatives from the major airports, as well as some capital city and regional airports, airlines, airport and airline peak bodies, Australian, State and Territory government agencies, fuel suppliers, the financial sector and researchers (table A.2).
- The Commission held public hearings in Sydney and Melbourne focused on the market to supply jet fuel during November 2018. Additional public hearings were held in Canberra, Sydney and Melbourne in March 2019 to discuss the content of the draft report, including responses to the information requests and draft recommendations (table A.3).
- The final inquiry report was delivered to the Australian Government on 21 June 2019.

The Productivity Commission thanks all participants for their contribution to the inquiry.

Table A.1 Public submissions received

<i>Participant</i>	<i>Submission number</i>
A1 Airport Parking	DR154 *
Adelaide Airport Limited (AAL) (Adelaide Airport)	32, DR97 *
Adelaide Joint Operated Storage Facility (JOSF) Joint Venture (JV)	DR121
Air New Zealand	43
Airlines for Australia & New Zealand (A4ANZ)	44, 83, 85, DR106, DR180 *#
Airport BUG Incorporated	88, DR151 *
Airports Council International (ACI) World	16
Airports Council International Europe (ACI EUROPE)	DR177
Andrew's Airport Parking Group	30, DR152 *#
Arblaster, Margaret	DR91, DR171
Archerfield Airport Chamber of Commerce Incorporated (AACCI)	81 *#
Archerfield Airport Corporation (AAC)	84, DR105
Armstrong, Heather; Coles, Dr. Allan	DR127
Aurizon	DR129
Austrade	61
Australia Pacific Airports Corporation Limited (APAC) (Melbourne Airport)	33, 46, DR107 *#
Australian Airports Association (AAA)	50, 73, DR94, DR175, DR183 #
Australian Airports Investors Group (AAIG)	20
Australian Business Aviation Association Inc. (ABAA)	DR110
Australian Chamber of Commerce and Industry — Tourism	28
Australian Competition and Consumer Commission (ACCC)	59, DR158 #
Australian Finance Industry Association (AFIA)	67, 80, DR168 *
Australian Government Department of Home Affairs	41
Australian Government Department of Infrastructure, Regional Development and Cities (DIRDC)	40 #
Australian Institute of Petroleum (AIP)	76, DR123
Australian Mayoral Aviation Council (AMAC)	10, DR95
Australian Rail Track Corporation (ARTC)	39, DR148
Avdata	24
Bailey, Graham	69
Barton MP, Rodney	DR133
Bayside Council	DR166 *
Bioenergy Australia	21
Bird, Alan	DR150
Bland Shire Council	5
Board of Airline Representatives of Australia (BARA)	37, 42, 71, DR92, DR160, DR184 *#
Board of Airline Representatives of New Zealand (BARNZ)	DR113
Boscutti, Stefano	DR163 *#
BP Australia	47, DR153 *

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Table A.1 (continued)

<i>Participant</i>	<i>Submission number</i>
Bracun, Charles	DR136
Barnard, David; Hamilton, Carrie	DR146
Brisbane Airport Corporation (BAC) (Brisbane Airport)	38, DR109, DR179 #
Brisbane Joint User Hydrant Installation (JUHI) Joint Venture (JV)	DR122
Buckman, James	DR89
Bush CB, Dr Harry	DR93
Business Council of Australia (BCA)	45
Caltex Australia Limited	34, DR167 *
Canberra Airport	3, 36, 56, 68, DR145, DR169 *
Carew, Edmund	DR90
City of Albany	DR170
Clarke, John	DR102, DR162
Commercial Passenger Vehicle Association of Australia	DR141
Emirates Airlines	87 *
Essential Services Commission (ESC)	7
FedEx Express	DR143
Forsyth, Prof. Peter	15, DR159
Frontier Economics	DR117
Hassell, William	55
Hayes, Robert	DR98
Heath, Julian and Sandra	DR137
Hobart International Airport Pty Limited (HIAPL) (Hobart Airport)	31 *
H.R.L Morrison & Co	DR111
Hunters Hill Trust	DR140
IFM Investors	25
Infrastructure Partnerships Australia (IPA)	58, 77, DR157
Inner West Council	DR96
International Air Transport Association (IATA)	27, DR116
Jetport Airport Parking	DR165 *
Jones, Andrew	4
Karratha Airport	12
Kavanagh, Stephen	DR132
King Island Council	26 #
Kingston, Doug	57
Kuwait Petroleum Aviation (Australia) Limited (KPAA)	35, DR128 *
Maple, Faye	DR164
McWilliam, Karen; Miller, Nick	DR126
Melbourne Joint User Hydrant Installation (JUHI) Joint Venture (JV)	DR118 *#
Miao, Dr. Frances; Micklethwaite, Dr. Ken	DR135

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Table A.1 (continued)

<i>Participant</i>	<i>Submission number</i>
Mildura Airport Pty Limited	DR174 *
Mobil Oil Australia Pty Limited	74, DR139, DR161 *#
Name withheld	2 *
National Competition Council (NCC)	79, DR156 #
Newcastle Airport Pty. Limited	DR172
No Aircraft Noise Party (NAN)	11, DR120
North Queensland Airports	49 *
Northern Territory Airports (NTA)	8
NSW Government	62
NT Government	29
Patrinos, Maria	DR147
Perth Airport Pty Limited (Perth Airport)	51, 52, 75, DR114, DR173, DR178 *#
Perth Joint User Hydrant Installation (JUHI) Joint Venture	DR149
Peterson, Julian	1
Property Council of Australia	13
Prosper Australia	19
Qantas Group	48, 86, DR115 *
Queensland Airports Limited (QAL)	23, 65, DR134, DR185 *#
Regional Airport Users' Action Group; and Breust, Geoff J	9, DR103
Regional Aviation Association of Australia (RAAA)	66 *#
Regional Express (Rex)	63, 72, 82, DR108, DR182
Ryan, Mark	DR138
Shire of Esperance	DR176
Simpson, Louise and James	DR131
Smithson Planning	DR100
South Australian Freight Council (SAFC)	14, DR104
Starkie, David	22, DR119
Sutherland Shire Council	DR155
Sydney Airport Corporation (SAC) (Sydney Airport)	53, 78, DR112, DR181
Sydney Airport Community Forum (SACF)	DR101
Sydney Business Chamber (SBC)	17
Sydney Joint User Hydrant Installation (JUHI) Joint Venture (JV)	DR99
The Committee for Sydney (CFS)	18
Tourism and Transport Forum (TTF)	6
Tracey, Coleen	DR130
Transport Workers' Union of Australia (TWU)	60
Tulpule, Ashok	64

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Table A.1 (continued)

<i>Participant</i>	<i>Submission number</i>
United Airport Parking	DR124 *
Virgin Australia Group	54, DR142 *
Viva Energy Australia	DR125
Webster, Amanda	DR144
World Fuel Services (Australia) Pty Limited	70 *

^a An asterisk (*) indicates that the submission contains confidential material NOT available to the public. A hash (#) indicates that the submission includes attachments.

Table A.2 Consultations

Participant

Adelaide Airport Limited (AAL) (Adelaide Airport)
Air New Zealand
Airlines for Australian & New Zealand (A4ANZ)
Airport Coordination Australia (ACA)
Airports Council International (ACI) World
Airservices Australia (ASA)
AMP Capital
Auckland Airport
Australia Post
Australian Airports Association (AAA)
Australian Competition and Consumer Commission (ACCC)
Australian Finance Industry Association (AFIA)
Australian Government Department of Infrastructure, Regional Development and Cities (DIRDC)
Australian Government Treasury
Australian Institute of Petroleum (AIP)
Australian Logistics Council (ALC)
Australian Pacific Airports Corporation Limited (APAC) (Melbourne Airport)
Australian Taxi Industry Association (ATIA)
AustralianSuper
Avis Budget Group
Board of Airline Representatives of Australia (BARA)
Board of Airline Representatives of New Zealand Inc. (BARNZ)
BP Australia
Brisbane Airport Corporation (BAC) (Brisbane Airport)
Bureau of Infrastructure, Transport and Regional Economics (BITRE)
Caltex Australia Limited
Canberra Airport
CAPA - Centre for Aviation
Christchurch Airport
Civil Aviation Authority of Singapore (CAAS)
Cobham Aviation
Colonial First State
Emirates Airlines
Epstein, David
Essendon Fields
Forsyth, Prof. Peter
Fu, Dr. Xiaowen
H.R.L Morrison & Co
IFM Investors
Inner West Council
Jetstar

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Table A.2 (continued)

Participant

King Island Council
Kuwait Petroleum Aviation (Australia) Limited (KPAA)
Macquarie Group
Mobil Oil Australia Pty Limited
National Competition Council (NCC)
New Zealand Airports Association
New Zealand Commerce Commission (NZCC)
New Zealand Ministry of Business, Innovation and Employment (MBIE)
New Zealand Ministry of Transport
New Zealand Treasury
NSW Department of Industry (NSW DOI)
NSW Department of Premier and Cabinet (NSW DPC)
No Airport Noise Party (NAN)
Orange City Council
Park 'N Fly
Parkes Shire Council
Perth Airport Pty Limited (Perth Airport)
Qantas Group
Queensland Airports Limited (QAL)
Queensland Investment Corporation (QIC)
Regional Aviation Association of Australia (RAAA)
Regional Express (Rex)
SA Department of Planning, Transport and Infrastructure (SA DPTI)
South Australian Freight Council (SAFC)
Skippers Aviation
Sydney Airport Corporation (SAC) (Sydney Airport)
Toll Group
Uni Super
Vertigan, Dr Michael
Virgin Australia Group
Viva Energy Australia
WA Department of Transport (WA DoT)
Wellington Airport

Table A.3 Public Hearings

Participant

28 November 2018 - Sydney

Board of Airline Representatives Australia (BARA)
Australian Airports Association (AAA)
Bioenergy Australia

30 November 2018 - Melbourne

Australian Pacific Airports Corporation Limited (APAC) (Melbourne Airport)
Northern Territory Airports (NTA)
Brisbane Airport Corporation (BAC) (Brisbane Airport)
Department of Infrastructure, Regional Development and Cities (DIRDC)
Perth Airport Pty Limited (Perth Airport)
Caltex Australia Limited
Benjamin Schofield

25 March 2019 - Canberra

Bush, Dr. Harry
Regional Airport Users' Action Group
Canberra Airport

26 March 2019 - Sydney

Sydney Airport Corporation (SAC) (Sydney Airport)
Brisbane Airport Corporation (BAC) (Brisbane Airport)
Clarke, John
Qantas
Inner West Council
Sydney Airport Community Forum (SACF)
Regional Express (Rex)
Australian Business Aviation Association Inc. (ABAA)
H.R.L Morrison & Co
Virgin Australia Group

28 March 2019 - Melbourne

Australian Pacific Airports Corporation Limited (APAC) (Melbourne Airport)
Airlines for Australia & New Zealand (A4ANZ)
Australian Airports Association (AAA)
Adelaide Airport Limited (AAL)
Board of Airline Representatives of Australia (BARA)
Perth Airport Pty Limited (Perth Airport)
Cbus
Frontier Economics
Smithson Planning
Qantas/Jetstar

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Table A.3 (continued)

Participant

International Air Transport Association (IATA)
David Lyon

29 March 2019 - Melbourne

Australian Institute of Petroleum (AIP)
Viva Energy Australia
Board of Airline Representatives of New Zealand (BARNZ)
Caltex Australia Limited
Arblaster, Margaret
Forsyth, Prof. Peter
Carew, Edmund

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