



AIRLINES FOR
AUSTRALIA &
NEW ZEALAND

ECONOMIC REGULATION OF AIRPORTS

SUPPLEMENTARY SUBMISSION

TO THE PRODUCTIVITY COMMISSION INQUIRY

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PREFACE

The overall objective of A4ANZ's submissions to the Productivity Commission (PC)'s Inquiry into the Economic Regulation of Airports (the Inquiry) is to contribute to an informed debate on what constitutes effective policy in this area; focusing attention on the minimum change required to create a regulatory environment that facilitates commercial negotiations and ultimately delivers better outcomes for consumers and society.

We have set out this supplementary submission so that it again addresses the key areas of the Inquiry, with a focus on ensuring that claims made in other submissions are balanced by facts. The airports, their representative body, the Australian Airports Association (AAA), and airport investors, presented a case for maintaining the status quo; arguing that there is no problem and that change will bring instability. These propositions are based on a number of unsubstantiated, and in some cases, false statements made to the PC, summarised in a Fact Check (see next page).

A4ANZ understands the natural hesitancy around change but it must not stop us properly examining genuine alternatives to the current system. It is important that claims are challenged with facts, and are not given equal weight when considered against evidence. In other submissions to the PC, a range of experts and airport users provided evidence to show the impact of Australian airports' monopoly powers, which cannot be ignored. Further detail is available in our [original submission](#), as well as those of other airport users, to which we have referred. Having now analysed all the submissions, we are satisfied that the options we have presented meet the needs of stakeholders, but most importantly, the Australian consumer. We note the concerns raised about change and have made genuine attempts to address them, acknowledging the PC's appeal for evidence to support claims; our response is supported by both international evidence and expert analysis.

Sensible policy cannot rely on guidelines and goodwill alone. What is needed is to comprehensively address the issue of airport monopolies and market power, through a regulatory environment that encourages innovation and efficiency. As our original submission shows, a vibrant aviation sector is good for both consumers and the economy.

ABOUT AIRLINES FOR AUSTRALIA & NEW ZEALAND

A4ANZ is an industry group, established in 2017 to represent airlines based in Australia and New Zealand, including: Air New Zealand, QANTAS, Virgin Australia, Regional Express (REX), Jetstar and Tigerair. Member-funded and representing international, domestic, regional, full service and low-cost carriers, A4ANZ advocates on key public policy issues relevant to airline operations, including efficient access to domestic airport infrastructure.

The A4ANZ Board identified at the time of the organisation's formation that one of its highest priority issues was ensuring that the regulatory and pricing environment for monopoly airports:

- Encourages competition and innovation;
- More accurately reflects cost inputs;
- Accurately reflects a reasonable and fair return on assets;
- Keeps growth at reasonable not exponential rates;
- Supports investment and maintenance of infrastructure that is fit for purpose, efficient and timely; and
- Maintains accessible airfares for consumers across all areas of Australia and New Zealand.

AUSTRALIA'S AIRPORTS

MYTHS vs FACTS

Australia's airports are monopolies and behave as such. With no incentive to charge reasonable prices, their profits have continued to grow over time, with the ACCC's price-monitoring regime powerless to control this. The impact is felt by every Australian airport user, but especially consumers. The airports say the system is working fine and doesn't need to change. This is just one of the many myths in submissions to the Productivity Commission that must be dispelled.

MYTH:

The threat of regulation constrains airports' profitability and exercise of market power.¹

FACT:

Analysts describe our region's airports as having unregulated revenue, with free rein on pricing.²

This has allowed Australian airports to earn margins more than double the international average.^{3,4}



MYTH:

Airport charges have risen only moderately, and high levels of airport profitability have abated since 2011.⁵



FACT:

Airports have been independently assessed as earning "supernormal profits" since 2011.⁶ **Revenue per passenger has risen 25% in a decade.**⁷ Operating profits/passenger in 2017 place Australian airports well above global comparators.⁸

REVENUE:



MYTH:

Airports have not exercised market power in non-aeronautical areas.⁵

FACT:

9 of the top 10 most expensive airports in the world for rental car operators are in Australia, more expensive than Heathrow, LAX and Paris CDG.⁹



MYTH:

Airports' market power is neutralised by airlines being able to change routes if they object to contract terms.⁵

FACT:

Destination substitution isn't a realistic option¹² for Australian travellers.

Network airlines are not in a position to readily withdraw from routes.¹³



MYTH:

Changing the regulatory regime is unnecessary and risky.¹⁰

FACT:

Regulatory reform is needed to generate **\$18 billion** in economic benefits, including:

- **\$5.9B consumer surplus**
- **\$10.9B GDP benefit**
- **7000 jobs**
- **\$819M travel time savings**
- **\$480M boost to tourism.**¹¹

MYTH:

Airport charges only account for **4-8%** of an airline ticket price.⁵

FACT:

Evidence presented by airports shows that charges can actually be **>20%** of the ticket.¹⁴ **They make up the single largest cost to Australian airlines on some domestic routes (>30%),** but account for a much smaller proportion in the EU and US.¹⁵

MYTH:

Quality standards at Australian airports have improved.⁵

FACT:

ACCC data show no increase in quality at any monitored airport since 2015.⁷



MYTH:

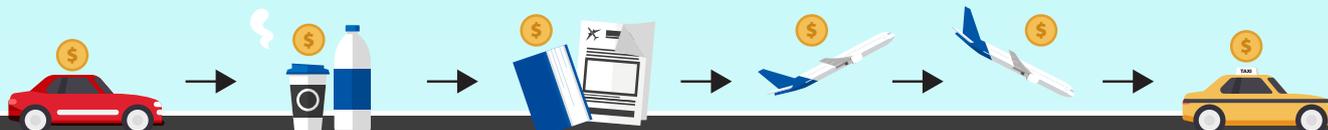
There is no evidence that airports make excessive profits on car parking.⁵

FACT:

Airports can earn a profit of over 70 cents from every dollar consumers spend on parking.⁷



Consumers are paying the price of monopoly airports at every stage of their journey



References:

1. Houston Kemp 2018
2. UBS, Morgan Stanley 2018
3. Leigh Fisher 2017
4. Frontier Economics 2018
5. Australian Airports Association 2018
6. Grattan Institute 2017
7. ACCC 2018
8. Department of Infrastructure, Regional Development and Cities 2018
9. Australian Finance Industry Association 2018
10. Australian Airports Investor Group 2018
11. Frontier Economics 2018
12. Copenhagen Economics 2012
13. Norton White 2018
14. Melbourne Airport 2018
15. Qantas 2018

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IS THERE REALLY A PROBLEM WITH AUSTRALIA'S AIRPORTS?

Under the current regulatory settings, airports have been able to earn profits that have been objectively assessed as excessive, and exert market power over airport users, both aeronautical and landside.¹ This is indeed a problem, for consumers and the economy as a whole.

In this section, we present further evidence to address the argument that change to Australia's regulatory system for airports is not required. Specifically, we address the erroneous claims regarding airport profitability and the impact of charges on airport users and consumers.

Scale of profitability and growth

A4ANZ's position has never been, nor will ever be that Australian airports should not be profitable; a prosperous aviation sector is good for the economy and for consumers. However, A4ANZ believes that the excessive profits earned by Australian airports shouldn't be at the expense of further advancements in quality and innovation in the sector, nor at the expense of Australian travellers.

While the AAA's submission to the Productivity Commission claims that airport charges have risen only moderately, and high levels of airport profitability have abated since 2011², this does not marry with the available data. Successive ACCC Monitoring Reports document the steady rise in charges per passenger³, and a 2017 report from the Grattan Institute^a describes airport earnings over that same period in the following way: *"Nearly half of returns earned by airport operators were super-normal profits^b, on average, from 2010-11 to 2015-16."*⁴

Presented in support of the AAA's claims was a report from HoustonKemp, in which they argue that while the airports may be assumed to have some market power, they do not exercise it.⁵ The empirical analysis supporting this finding is based on comparing a series of returns on aeronautical assets, contained in the ACCC's airport monitoring data, with an estimate of a reasonable return on capital for the airports. While Frontier Economics have previously undertaken a profitability analysis of the four monitored airports, we asked them to repeat this using the WACC estimates from the HoustonKemp report. This analysis is presented in **Appendix A**.

It is worth noting that while there is agreement between Frontier and HoustonKemp on aspects of the appropriate approach to assessing whether airports are exercising market power; that is, that it requires a comparison of some measure of return against the opportunity costs of capital invested in the airport's operation, the outcomes and interpretation of the analysis differ.

Both Frontier and HoustonKemp's analyses rely on the ACCC's monitoring data as a key input and for consistency and comparability, Frontier have adopted HoustonKemp's estimates of WACC. There are, however, two key points of difference in the approaches they have taken.

^a We note that Perth Airport sought an amendment to the Grattan Institute's original report, and accordingly, we have ensured we used the revised text in the quote above. We further note, however, that the revision does not change their characterisation of the airport profits as super-normal. Both documents are available on the Productivity Commission Inquiry page: <https://www.pc.gov.au/inquiries/current/airports-2019/submissions#initial>

^b "Super-normal" profit is defined as extra profit above that level of normal profit, that is, the excess profit a firm makes above the minimum return necessary to keep a firm in business

Firstly, Frontier consider returns across the airport, rather than restricting analysis to aeronautical services. Frontier's approach correctly accounts for market power that is held by airports in non-aeronautical services and avoids arbitrary cost allocations that reduce returns attributed to aeronautical services.

Secondly, Frontier estimate excess returns using several methods, including the most theoretically appropriate measure of excess returns – the internal rate of return, or (equivalently) the net present value. This analysis uses cash flow data and opening and closing asset values. Frontier have also cross-checked these results against other measures including return on capital employed, assets and equity, and margins.

In all cases, Frontier found the monitored airports have persistently earned returns above the cost of capital, while margins are the highest in a broad international sample. Frontier have also estimated the present dollar value of the excess returns accruing to the owners – noting that the dollar value of the overcharging to airport users (including both airlines and other users) is large. In NPV terms in years of the sales, the excess return is more than \$3 billion. Taking into account the time value of money and bringing the value of excess returns to 2017 dollars shows the likely value of excess return at around \$7 billion.

While HoustonKemp reached the conclusion that airports are not exercising their market power, Frontier's analysis of the same profitability data clearly leads to a different conclusion: that there is in fact strong evidence that the major Australian airports *do* exercise their market power. While Houston Kemp objected to what they described as "*the increasing strength of Frontier's conclusions on airport market power*", it is perhaps salient to note that Frontier's conclusions are consistent with those made not only by the ACCC in its most recent Monitoring Report⁶, but the Grattan Institute⁷, the International Air Transport Association (IATA)⁸ and independent expert submissions to the Productivity Commission's Inquiry.⁹

Australian airports outperform their global peers on profitability

While Frontier's benchmark returns for the measures described above come from estimates of the airports' cost of funds, another benchmark that can be used is the returns earned by airports that are subject to either competition, or effective regulation.

It is important to consider the basis for making comparisons as, while international benchmarking studies can provide some useful information on comparative airport performance, the studies are generally orientated to operational (technical) efficiency and not designed for the purpose of identifying the use of market power. In the InterVISTAS report produced for the AAA, for example, the "peer airports" in fact have significantly different characteristics to the Australian comparator airport – with the only similarity generally being the total number of passengers.¹⁰

Given the unique characteristics of Australian airports - the high proportion of domestic travel, type of ownership, connectivity network, and variable hub characteristics - it is difficult to find appropriate international airports for meaningful comparison; they are in fact 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.

Frontier undertook an international comparison of margins, as a cross-check on their main results. Airports that were selected for comparison purposes were chosen on the basis that they are constrained in some way; by competition, regulation, or ownership structure. This comparison indicates that all of the monitored Australian airports have average EBITDA margins well above the average margin calculated across the sample of

comparator airports. Sydney earns the highest margin of any airport in Frontier’s sample (more than 8 of every 10 dollars earned contributes to profits), and the other airports analysed are all in the top 6.

It is apparent from these data that:

- average EBIT margins at all the Australian monitored airports, at between 60-64 per cent are extraordinarily high by international standards (average 29 per cent). Only Auckland – another airport subject only to price monitoring – has margins comparable to the Australian airports.
- claims from airports that the high EBITDA margins are due to by comparatively high capital investment¹¹ cannot be justified when we see that EBIT margins are also relatively high. Sydney Airport’s higher relative depreciation charges narrow the gap with other Australian airports, but still leave its margins the highest in the comparator set.

Frontier posit that these comparisons provide further support for the conclusion that the earnings of the Australian airports are consistent with the exercise of market power. Frontier’s full analysis is available at **Appendix A**.

Australian airport charges some of highest in the world

The above findings are consistent with analysis undertaken by McKinsey for IATA, referred to in their submission to the PC, in which they cite Australia’s regulatory model as the reason our monitored airports perform so much better than global peers, noting: “[This analysis] shows the disparity between Australian airports and other airports analysed in terms of regulatory oversight. It is clear that the lack of effective regulatory intervention has allowed the four Australian airports in this sample to continue increasing prices without adequate safeguards.”¹²

Despite this, the AAA and various airports have allocated significant space in their submissions and public commentary attempting to demonstrate that airport charges only account for very small proportion of an airline ticket price, and that the relationship between airport charges and airfares is tenuous.¹³ This has been done by using a significant number of assumptions (as noted by *InterVISTAS*)¹⁴, and through cherry-picking data from both domestic and international airfares to suit the particular narrative.

While there is indeed variability in the proportion of airport charges in a single ticket across airports, carriers, routes, and fare types, what is consistently clear is the economic evidence which demonstrates that, as a whole, airport charges make up a significant proportion of Australian airlines’ overall costs.^{15,16}

Furthermore, this proportion is significantly more than that spent by carriers in the United States or the European Union¹⁷, with evidence presented in the AAA’s own submission, demonstrating the disproportionately high percentage of overall airline costs attributable to airport charges in Australia, up to twice as much as in the EU.¹⁸

This is of course an issue not only for Australian airlines but international airlines seeking to land in Australia, as A4ANZ highlighted in our original submission, and was also noted by the Board of Airline Representatives Australia (BARA).^{19,20} In 2015, AirAsia Chief Executive Tony Fernandes noted that “When you put Australian airport charges and taxes against the world, it is probably one of the highest in the world.”²¹

Attempting to minimise the impact of high and growing airport charges by selectively referencing individual ticket contributions misses the major point, well described in a recent report by CEG, commissioned by Airlines

for Europe and IATA, investigating airport charges in Europe. The authors note that competition between airlines has led to improvements in the affordability of and access to air travel, enabling people to travel more readily to visit family and friends, and supporting businesses in connecting with suppliers and customers.

However, these gains in affordability will be limited in future or even reversed if excessive airport charges are able to continue.²² As the CEG report notes, *“a commercially operated airport that faces no competitive constraint can be expected to set its charges at the monopoly level so as to maximise overall profits.”* Clearly, Australian airports are doing just that, and there is nothing compelling in the airports’ and AAA’s submissions to the PC to challenge this.

Claims that airports routinely offer discounts to airline customers as evidence that all is not what it seems with pricing²³, should be read with caution. The CEG report notes that monopolists can in fact maximise their profits through setting customer-specific prices. Furthermore, they make the salient point that *“a discount offered on an already inflated level of airport charges may not be sufficient to lead to actual charges being in line with competitive levels.”*²⁴

A brief scan of the submissions to the Inquiry makes it clear that experience with high charges and dissatisfaction with the current situation for airport regulation in Australia go beyond the airlines. The following section builds on our initial submission to highlight the subsequent evidence of airports exercising their market power over other airport users; who shared anecdotes strikingly similar to the experiences of the airlines.

IS IT JUST THE AIRLINES COMPLAINING?

Consumers, rental car operators, taxis and retailers all face high charges at airports, well in excess of what they pay in other settings. Yet submissions from groups other than the airlines appear to have been ignored by the AAA, who appear intent on creating the myth that the public and indeed policy-makers should view this as little more than a stoush between airlines and airports. Clearly, consumers do not accept this.

The consumer experience at airports is perhaps best depicted in a humorous tweet from earlier this year which attracted more than 375,000 likes. While it was written by an American, it has now been retweeted many times internationally, suggesting that the description is a highly relatable one.

The airport is a lawless place. 7am?
Drink a beer. Tired? Sleep on the floor.
Hungry? Chips now cost \$17

24/5/18, 2:05 am

87.7K Retweets 376K Likes

That travellers are stung by high prices and limited services at some airports around the world is not new. What is worth serious consideration in this Inquiry, however, is the *additional* hits Australian travellers are expected to take compared to their overseas counterparts. When unconstrained monopoly airports can – and do – apply the same principles to *all* their customers, without a realistic avenue for recourse, it is the consumer who ultimately pays.

Landside impact of market power

In their original submissions to the Inquiry, the AAA and several airports claim that Australian airports have not exercised market power in landside access.²⁵ Specifically, the AAA notes analysis undertaken by HoustonKemp which argues that there is no demonstration of substantial market power in the provision of car parking services.²⁶ From this, the AAA conclude that there is no basis for further ACCC monitoring of car park services at the airports, claiming that it represents an unnecessary regulatory burden; and ask the PC to recommend its abolition.

While the ACCC themselves note that the current monitoring regime does not provide an effective constraint on airports' market power,²⁷ removal of the regime without an appropriate regulatory framework in place, would leave consumers even more exposed. The Consumer Action Law Centre has noted that the cost of airport carparking is tantamount to price-gouging, and that regulatory oversight remains necessary; stating that airports providing the ACCC with information regarding car parking should not be a regulatory burden if airports are doing the right thing.²⁸

Under the current regime, the effect of an airport's unconstrained monopoly power on landside access is, to an extent, demonstrated in the ACCC's annual Airport Monitoring Reports. The 2016-17 Report noted that landside access revenue at each of the monitored airports increased in real terms – with profit margins for car parking remaining very high across all airports; up to \$27 profit per vehicle.²⁹

While the ACCC report does note that consumers can generally access cheaper (40% on average) parking at off-airport car parking at a distance from the terminals,³⁰ the operators of off-airport car parks are negatively impacted by an airport's monopoly behaviour too. The Andrew's Airport Parking Group, for example, cited examples of some airports continuing to increase access charges, while withholding or delaying information, and with disappointing levels of consultation.³¹

For other landside customers, the AAA again refer to HoustonKemp reports in arguing that airports have not exercised substantial market power in relation to landside access charges.³² The submission by the Australian Finance Industry Association (AFIA), however, paints an altogether different picture to these assertions. The AFIA, on behalf of its rental car operator members, provided data highlighting the fact that 9 out of the top 10 most expensive airports in the world for rental car operators are in Australia – more expensive than Heathrow, LAX or Paris-CDG.³³ Their submission also shows that in Australia, rental car companies are in some cases charged up to three to seven times more to operate at airports compared with city locations.³⁴

Airports exercising market power is not a new experience for taxi operators, either, as evidenced in the submission from the Essential Services Commission (ESC). The ESC describes a situation in which airports can unilaterally increase access fees for taxi operators; with Melbourne Airport imposing almost a three-fold increase in rank access fees over a two-year period.³⁵ This example provides yet another indication of the exercise of market power: a monopoly airport's ability to unilaterally increase fees, without the provision of transparent information.

Finally, and perhaps most significantly, the exercise of monopoly powers is even present when an airport's customer is the Government, and by default, the taxpayer. Recent reports document a dispute between the owners of Darwin Airport and federal border agencies over customs and security services, which has seen the Government face rent demands in what they have described as "an unprecedented lease agreement."³⁶

The effect of the exercise of airport market power all in of the cases outlined above ultimately flows to the consumer, and the Government is justified in demanding a system which serves Australians better.

ARE QUALITY SERVICE STANDARDS IMPROVING?

Arguably, Australian airports should be among the best in the world, given the high airport charges and levels of profitability. A reasonable assumption to make as charges have climbed higher is that quality service standards would make improvements commensurate with these increases. However, quality standards at Australian airports have *not* been improving over time, despite claims to the contrary.³⁷

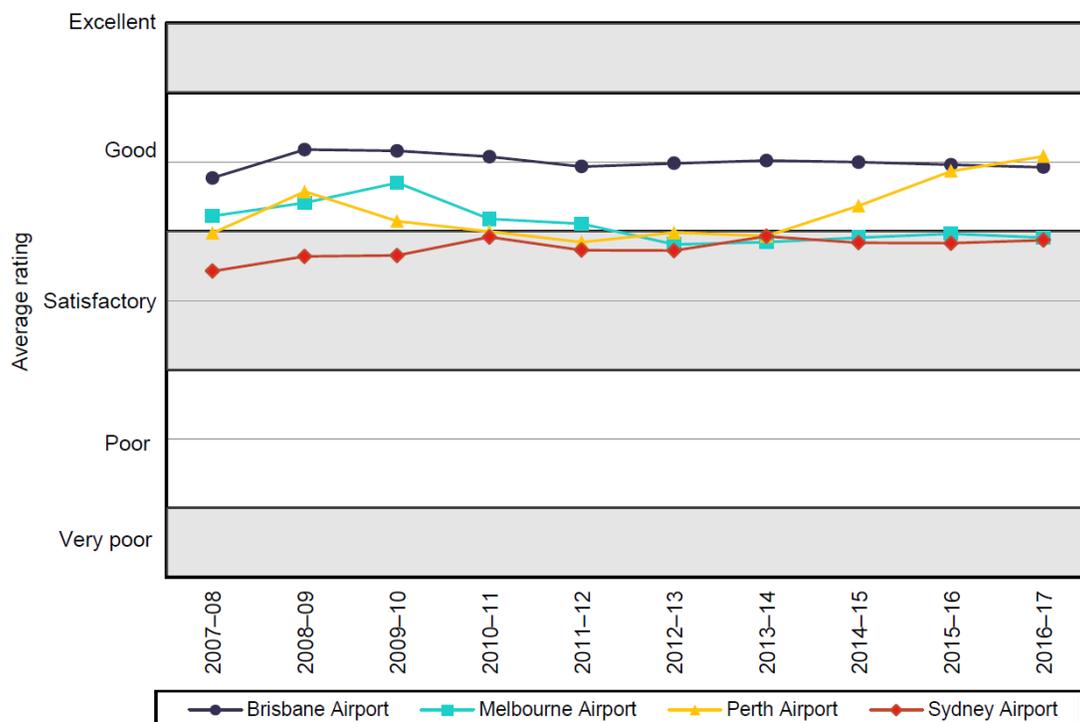
There is a disconnect between Australian airport charges and quality, which has been noted not only by the ACCC and domestic airlines, but also by international carriers. As a China Eastern Airlines spokesman recently said, “Australian airports – especially the larger airports – continue to increase their charges, but offer deteriorating services to both the Chinese airlines and the inbound Chinese visitors”.³⁸

Quality standards at Australian airports have stagnated

A threat-based regulatory model is indeed based on the theory that the existence of a threat is enough to constrain monopoly operators from exploiting their market power. However, in order for it to work effectively, there must be a credible threat.

Rather than selectively using one specific metric, we looked at the ACCC’s single overall quality of service rating. This overall rating covers aeronautical, car parking and some landside operations, and represents the average score that the airport achieved across the measures based on airline surveys, passenger surveys and objective indicators. The ACCC analysis makes clear that, with the exception of Perth Airport, quality service levels have not improved overall in a decade.³⁹ And the two largest airports, Melbourne and Sydney, only rate as “satisfactory”, as this graph from the ACCC’s latest report shows.

ACCC: Overall quality of service rating: 2007–08 to 2016–17



Source: Airline surveys, passenger surveys, and objective indicators.

IATA's submission to the PC reminds us, from their global vantage point, that we ought not to be surprised by this situation in Australia. Our monitoring regime does not allow for the ACCC to do much more than just report the data; they are not able to question the efficiency or potential innovations that *could* be possible for the airports. The IATA submission goes on to say that *"at best, the monitoring model seeks to perpetuate the status quo, to prevent gross deterioration."*⁴⁰

To be clear, A4ANZ is not suggesting that service quality at any of the monitored airports is poor. However, questions remain about whether increasing charges can be justified when quality ratings are not following the same trajectory. It is of course possible that the increased charges are being directed to investments elsewhere, but both the ACI and AAA submissions to the Inquiry note that Australian airports have invested in expanding capacity *and* maintaining and improving quality over many years.^{41,42} While we have no reason to doubt these claims, they are worthy of further interrogation; not least to ask, who is ultimately paying for these investments?

As the CEG report notes, *"airports that set their aeronautical charges to fully recover infrastructure costs will be earning excessive profits overall. This is because airports earn significant revenues above costs from their retail and other non-aeronautical services."*⁴³

It is therefore unsurprising that priority for quality improvements is given to revenue-generating areas of the airports. Comparing consumer amenities and public areas with the retail or food and beverage precincts at many of Australia's domestic terminals provides a simple illustration of this point, also noted by other airport users⁴⁴ and reflected in the ACCC monitoring reports.⁴⁵

The dual-till approach to charging at Australian airports provides a disincentive for this situation to change, without intervention. Or as IATA's submission describes it, *"dual till can incentivize airports to invest in potentially higher-return commercial activity to the detriment of essential aeronautical infrastructure."*⁴⁶

As IATA's submission further explains, *"the dual till approach in Australia has resulted in higher overall charges for users, further exacerbated by the lack of fit-for-purpose regulatory oversight regime. A dual till approach to charging is possible only because airports do not operate in a competitive environment and are able to ring fence individual high-yielding business streams to extract profit."*⁴⁷

Like A4ANZ, IATA also argued that the application of a hybrid till should be considered for Australian airports. Progressing towards this provides one way to reflect the pricing mechanisms airports would apply if they were operating under genuine competition.

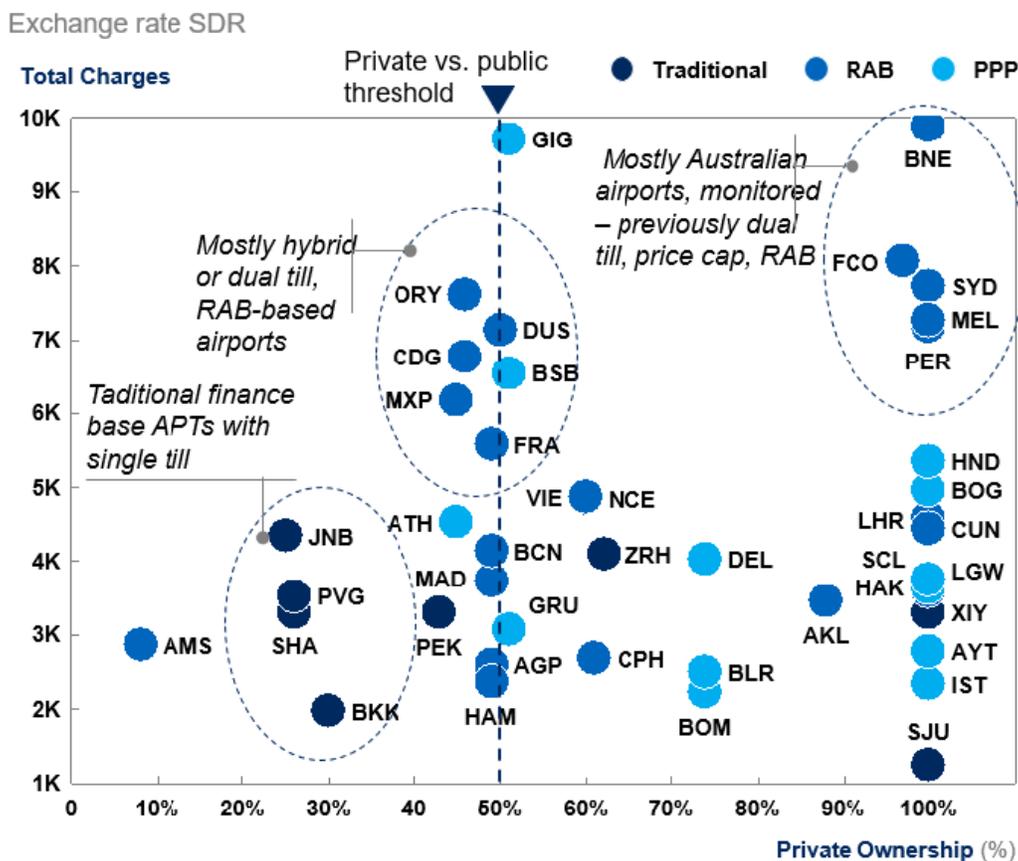
In the following sections, we consider the claims of inter-airport competition, and other arguments for the existence of conditions which mitigate market power: countervailing power of customers, and regulation.

DO AUSTRALIAN AIRPORTS COMPETE WITH EACH OTHER?

“When you have an infrastructure monopoly, the default situation is not choice; it's not competition in markets; the default is a monopoly.”⁴⁸

The AAA’s claim, repeated in submissions by individual Australian airports^{49,50,51}, that airports are in competition with each other, and that this creates a “strong incentive” to price aeronautical services competitively⁵², must be considered with a degree of scrutiny.

Firstly, while there may be a *theoretical* driver for competition between airports in the international market, Australian airports are not actually considered to be price-competitive by international standards. If such limited competition does indeed exist, it does not appear to be driving down pricing at all, with the Chinese airlines cited earlier explaining that all Australian ports are expensive. Analysis by McKinsey, presented in IATA’s submission to the PC, shows that the Australian airports are considerably more expensive than others around the world, even when compared to others under private ownership (see graph below).⁵³



Sources: Airport performance database created by McKinsey & Company for IATA.
 Total Turnaround costs for an aircraft A320-200 in 2015.
 SDR (Special drawing rights) is a currency instrument used by the IMF, representing a combination (weighted average) of multiple currencies comprising the US dollar, Euro, British Pound and Yen.

Secondly, there are very few circumstances in which it could genuinely be demonstrated that there is competition between airports which might pose a material constraint on the airports. This is because Australian

airports have unique characteristics, particularly in terms of the passenger mix, which is approximately 75% domestic, 25% international.⁵⁴

What this means is that while there may theoretically be some competition for the international market flying into Australia – and we have seen above that it is limited at best – it does not affect deals made with the domestic airlines, who cannot readily choose a different port (an issue we explore below).

Even where there is the prospect of choice, factors such as access time, and the frequency of air services and connections from an airport, drive passenger decision making. This holds true even for Brisbane Airport, for which a theoretical argument could – and has been - mounted for competition in some markets⁵⁵; yet it is clearly not having the positive impact claimed.

The fact is, inter-airport competition is largely irrelevant in the Australian context. Airports making claims about its existence and apparent effects on pricing would perhaps benefit from reflecting on their own assessments of competition in the jet fuel market. Their commentary on this issue displays a shared policy position; one which not only acknowledges the harms caused by a lack of competition and having to negotiate with a monopoly supplier, but has the AAA seeking to “*break up any restrictive supply arrangements currently in place*”.⁵⁶ The question therefore remains as to why monopoly airports believe their businesses should be immune to similar Government interventions and reforms?

ARE AUSTRALIAN AIRLINES SO POWERFUL IT OFFSETS AIRPORT MARKET POWER?

In contrast to airports, airlines are in genuine competition with each other. As IATA observed, given this competition, there is clear economic logic against the statement that such airlines could have countervailing market power, similar to the airports who do not compete. Airlines “*seek profitable opportunities to serve passengers, and rightly win business from each other. The Australian aviation industry is mature and market opportunities are hard fought over.*”⁵⁷

This does not, however, give them the “significant” and “enormous” countervailing power claimed by airports in their submissions.^{58,59} Such claims ignore the inalienable fact that any business negotiating with a monopolist is placed at a significant disadvantage. This condition holds, regardless of the strength of their business, their corporate reputations or negotiating skills.

Airlines cannot readily change or withdraw from routes

Many of the airports’ submissions made the claim that any market power that does exist is neutralised by airlines being able to change routes if they object to contract terms.⁶⁰ However, network airlines are simply not in a position to readily withdraw from routes. This was well documented in multiple submissions to the PC^{61,62,63} and supported by expert analysis from Norton White and Frontier Economics.^{64,65} It is important to carefully consider all of these factors when assessing the *actual* levels of countervailing power, as opposed the persistent myths that it could exist, and therefore does.

An example of this is the claim from Canberra Airport that modal substitution by the Jetstar-Murrays bus arrangement is a display of countervailing power which impacts “more than a third” of their 1 million passengers.⁶⁶ This simply doesn’t hold up when we look at the actual numbers of passengers choosing this option; between January 2016 and August 2018, a total of 74 seats have been sold, which equates to just 2.3 seats a month, or less than 0.01% of the airport’s total passengers.⁶⁷ While the bus fare was cheaper than Canberra Airport’s charge, customer take-up of this option has clearly been poor, and hardly an example of countervailing power through modal substitution.

As European analysis has shown, destination substitution is rarely a realistic option for travellers⁶⁸ and it is even less so in the Australian context. The idea that airlines can “*fly anywhere, anytime*” simply ignores the realities of travel in Australia. Capital city airports provide the linchpin to all the major airlines’ networks, and domestic routes have remained stable and relatively static over time.⁶⁹ Therefore, the suggestion that airlines can just opt out of routes should not simply be accepted by policy makers without proper examination, particularly given historical evidence leaves this as little more than a hypothetical scenario.

It is also worth challenging the notion that domestic airlines have countervailing power against airports through their own market power over international competitors. Australia has prided itself on having one of the most liberal, highly competitive environments in the world, in which all our domestic airlines operate.

IATA’s submission to the PC highlights the fact that airports can – and do – raise charges, with the airline having no option but to accept the increase in charges. Even if they are to resist initially, bills must be paid in the end, leaving an airline with no leverage in negotiations.

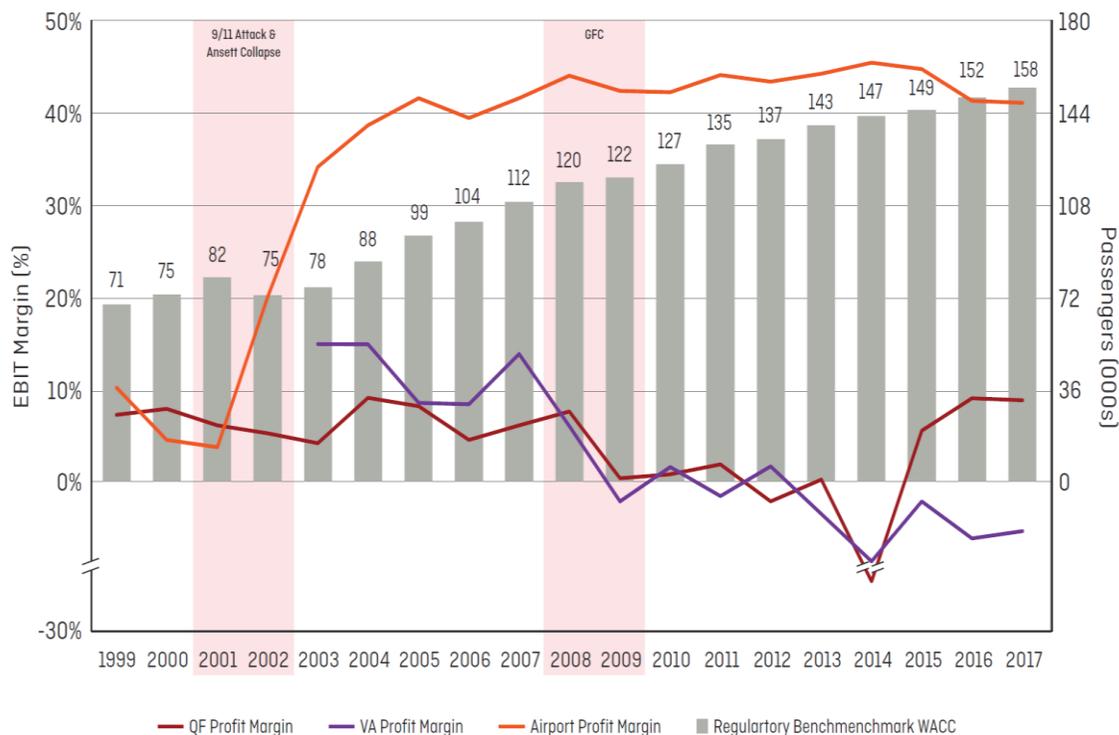
As outlined in Frontier Economics' report on Market Power⁷⁰, and further explained in IATA's submission to the PC, "An airline does not have a credible threat to reduce services at an airport, to damage the airport's business, because a competing airline could easily replace the reduced service. In this scenario, the negotiating airline would suffer a loss in business, but the airport would retain the same business, merely seeing a transfer in passengers from one airline to another."⁷¹

Profitable airlines ≠ no exercise of market power by airports

In the AAA's supplementary submission, and submissions from individual airports, quite a bit of space is dedicated to tracking and describing the recent profitability of airlines.^{72,73} The AAA go on to say that "these data indicate that Australian airlines are in robust economic good health".⁷⁴

Leaving aside the fact that airline profit margins are significant orders of magnitude lower than those of airports, the AAA and its members seem to be suggesting that, in order for there to be evidence of a problem, airlines ought to be struggling or unprofitable. Indeed, the fact that a proportion of their follow-up submission is dedicated to highlighting the recent profitability of airlines in Australia suggests they view this as something that somehow counters the market power that airports hold. This is a false equivalence, however, and the reasons for this are outlined below.

The fact that airports were able to maintain their charges and margins through the economic shocks caused by events such as 9/11 and the Global Financial Crisis, shows the protection airports have from such conditions, while airline margins are far more volatile. This also reflects the disparity in the risk profile of airlines and airports. Volatility within the market due to terrorism, SARS, global financial crisis and geopolitical conflict, dramatically impact an airline's ability to fill planes. This position forces *airlines* to lower fares, while such pressures are not felt by airports, as evidenced in the figure below, extracted from Qantas' submission to the PC.⁷⁵



Sources: ABS, ACCC Airport Monitoring Reports, BITRE, Annual Reports

Melbourne, Sydney and Brisbane Airports have all acknowledged this extremely positive performance, unaffected by economic downturns, in statements to investors, examples of which are shown here:

“Our passenger numbers and EBITDA have increased on an annual basis since the privatisation of Sydney Airport in 2002 to 31 December 2017, including in periods of challenging economic and operating conditions, such as the global financial crisis, the European sovereign debt crisis, the SARS outbreak, the Ebola outbreak, ongoing geopolitical conflicts and acts of terrorism.”⁷⁶

“Melbourne Airport’s passenger numbers have stayed resilient in the face of strong adverse shocks to both the demand and supply for air travel, and it has typically seen recovery of passenger numbers and a return to passenger number growth within 12 months of the adverse shocks.”⁷⁷

“Brisbane Airport Corporation (BAC) believes that consistency in passenger number growth rates have supported the stability of BAC’s revenues and cash flows, including during the global financial crisis and the European sovereign debt crisis. Between FY12 and FY17, BAC’s passenger numbers demonstrated consistent growth despite a severe deterioration in the global economic environment.”⁷⁸

A4ANZ’s ultimate objective is for the whole aviation sector to prosper. Consumers benefit when airlines do well, as we outline later in this submission. What is important to conclude from the discussion on profitability, however, is that the presence of airline profitability does not indicate the absence of airport market power.

Furthermore, if airports are genuinely of the belief that the cause of disputes and challenging negotiations between airports and airlines is the countervailing power of airlines; the regulatory amendments we have proposed would allow the airports easier access to dispute resolution mechanisms in such scenarios.

DO THE CURRENT REGULATORY SETTINGS CONSTRAIN AIRPORTS' EXERCISE OF MARKET POWER?

It is now abundantly clear that the current regulatory regime is not constraining the market power of airports. The evidence on airports' growing profitability, presented earlier, and Australia's performance globally, clearly illustrates this lack of constraint.

While the AAA and its advisers have suggested that airport behaviour and profitability *is* constrained by the existing regime^{79,80,81} the submissions by airport investor groups – anxious to avoid any change to the system – suggest otherwise.^{82,83} The lack of regulatory constraint on earnings and profitability is confirmed in analyst statements,^{84,85} and, as shown in the previous section, by the airports themselves.

Against this background, there is also good reason for the PC to question claims made about the regulatory regime's effectiveness based on the repeated citation of the one example that demonstrates it in action (e.g. the declaration application for Sydney Airport 2006).⁸⁶ Such claims need to be weighed against the large and growing body of evidence showing the system failing to work as intended.

Existing regime lacks a credible threat

As we noted in our initial submission, for a light-handed regime to work as intended, it requires a credible threat of greater regulatory intervention, such as arbitration, in the event of a dispute.⁸⁷ The current pathway to arbitration in the case of disputes is, despite claims to the contrary, not acting as a credible threat to constrain airports' market power when negotiating the terms and conditions of access. Given they have acknowledged the inability of the current system to hold airports to account, recent claims made by the AAA and legal advice produced by DLA Piper at their direction⁸⁸, require further scrutiny.

We maintain that recent amendments to the Competition and Consumer Act 2010 (CCA), specifically to declaration criterion (a), *will* have a negative affect an airline's ability to obtain declaration, and ultimately arbitration of terms, under Part IIIA. We sought further, independent legal opinion from Mr Michael O'Bryan QC^c on the memorandum prepared by DLA Piper with respect to criterion (a) of the declaration criteria in Part IIIA of the CCA.⁸⁹

Mr O'Bryan's full advice is attached to this submission as **Appendix B**. The advice notes his disagreement with the view presented in the AAA's DLA Piper memorandum which states that "*the recent changes to criterion (a) have not significantly increased the threshold that must be met for declaration of services supplied by non-vertically integrated infrastructure operators, such as airports.*" Mr O'Bryan's advice concludes that, following changes to criterion (a), with effect from 6 November 2017 it will be more difficult to satisfy the new criterion (a) in the case of non-vertically integrated natural monopolies, such as airports.⁹⁰

As is the case when proposing any change, it is important to acknowledge the concerns that have been expressed in relation to amendments to the regulatory settings for airports. We work through these in subsequent sections,

^c Mr O'Bryan QC was a member of the panel appointed by the Commonwealth Government in 2014 to conduct a review of Australia's competition laws and policy (now known as the Harper Review), which resulted in the enactment of the Competition and Consumer (Competition Policy Review) Act 2017.

but it is also worth noting that there is really only one party to the Inquiry objecting to suggested changes in these settings; the airports.

The AAA have stated that they believe that, *“whilst airlines generally receive from airports the information they require to negotiate, additional guidance from the government in this regard would help clarify expectations, reduce friction in the negotiating process and reduce transactions costs.”*⁹¹

While it may at first glance seem staggering that businesses of the size, scale and complexity of airports require guidelines for the purpose of undertaking commercial negotiations with their customers, it is perhaps not entirely surprising. Businesses that have operated as monopolies do not have incentives to look for the most efficient way to do things, nor do they have incentives to work in partnership with their customers. Guidelines alone, however, will not be enough to change behaviour, particularly as all parties have acknowledged the fact that adherence to the existing Aeronautical Pricing Principles is poor.

The AAA have in fact conceded that, under the current regulatory model, there are behaviours that fall short of the existing guidelines.⁹² At the same time as seeking Government guidance, however, they are also asking for the regulatory model to remain as it is for a further 5 years, no matter the cost. As the AAA’s Chief Economist said, *“People’s expectations aren’t being met and if the Government was able to provide some guidance about what reasonable expectations are then I think there’s a pretty fair chance that people will act accordingly. If that comes about, and in five years’ time the same sorts of conduct are being seen, I think we’re probably in for a much poorer outcome next time.”*⁹³

Guidelines alone will not change behaviour

Rather than relying on Government guidance alone and simply hoping for better conduct, however, A4ANZ is presenting a more constructive way forward to address the challenges created by the lack of a clear pathway to arbitration for dispute resolution. There is now a strong case for developing an industry-specific regulatory model for Australian airports.

This is not a new concept, and the PC will have seen a number of working examples from other sectors (e.g. broadcasting, gas) in the submissions received thus far. Furthermore, Mr Trevor Evans MP, who has prior experience as a regulatory economist, made the following observations in a recent speech to Parliament.

*“The regulation of infrastructure monopolies, whether it’s electricity, trains, gas pipelines, telco—you name it—is now well established. It has been happening around the Western world since the 1970s. However, just because the regulation is well established doesn’t mean that it stays up to date. The way we regulate the sector needs to be reviewed and kept up to date if we’re going to keep attempting to mimic competition where there would otherwise be strong monopolistic tendencies.”*⁹⁴

Although the comments were made in relation to the energy sector, they are highly relevant to airports. Accordingly, In the following section we consider what a revised regulatory model for airports could look like in terms of:

- the pathway to access arbitration;
- who undertakes the arbitration;
- what the arbitrator must have regard to in making a decision;
- what forms of arbitration they are permitted to use; and
- which airports are covered.

WHAT ARE THE BEST OPTIONS FOR AMENDED REGULATION?

The focus of this work has been to find the simplest, most pragmatic solution, to deliver the outcome required; that is, to have a credible threat of arbitration to drive commercial negotiations between airports and airport users, on reasonable terms and conditions.

A more effective alternative to the current regime is to create an industry-specific regulatory model. In designing this, A4ANZ is seeking the minimum change possible to provide an effective pathway to arbitration in the case of disputes and negotiation breakdowns between airports and their customers.

The ACCC's submission to the PC supported this goal, arguing that, *"Airlines should be provided with a more direct access to arbitration (rather than having to go through the Part IIIA declaration process) to reduce the imbalance in bargaining powers of airlines and monopoly airports. Moreover, using a qualified commercial arbitrator (similar to that under the gas regime under Part 23 National Gas Rules) to conduct these arbitrations, instead of the ACCC, may help result in timely outcomes."*⁹⁵

Airports-specific regulatory framework

While we acknowledge the initial reluctance of the PC to consider a sector-specific approach for airports, it is worth noting that a range of other industries have taken this option, as outlined in earlier submissions.^{96,97,98} The establishment of these models have all been informed, at least in part, by Part IIIA provisions, but importantly, their development recognises the need to approach specific industries and their needs differently.

This was a key point made in Dr Michael Vertigan's *Examination of the current test for the regulation of gas pipelines*, which highlighted the unequal levels of bargaining power and access to information that shippers face when seeking access to pipeline services. The report recommended the establishment of a new commercial arbitration framework, pricing principles and information disclosure requirements, to apply to unregulated pipelines that provide access to third parties.⁹⁹ From this, the national gas framework^d was introduced into the National Gas Law (NGL), to provide access for binding arbitration in the event parties are unable to reach a commercial agreement.¹⁰⁰ Introducing the framework acknowledged the fact that it is not appropriate for access to dispute resolution be predicated on whether or not the infrastructure asset (in this case, a pipeline) is covered by an access scheme.

As noted by the ACCC above, the framework has attributes that are also attractive in the context of airport users seeking to access services at Australia's monopoly airports.¹⁰¹ It may therefore be useful to now contemplate such a framework, given the advantages it could offer over deemed declaration options that still place reliance on the broad parameters of Part IIIA in resolving disputes.

After discussions with a variety of stakeholders, including Government and the ACCC, and considering other positions raised in submissions to the PC, we believe that the introduction of an airports-specific regulatory framework could be approached by amendments to the *Airports Act 1996*¹⁰² and *Airport Regulations 1997*.¹⁰³

^d The gas framework, agreed to by the COAG Energy Council and becoming operational in August 2017, provides for a staged approach to assist shippers seeking to access pipeline services. The stages consist of information disclosure by non-scheme pipelines, access negotiations, and the arbitration of access disputes.

The objectives of any amendments would be that arbitration could be activated where parties to a negotiation are unable to reach a commercial resolution.

Arbitration framework characteristics

Characteristics for an arbitration framework could include the following:^e

- Commercial negotiation between parties would occur whenever any party sought access or services at airports;
- After negotiations had commenced either party could signal a breakdown which would trigger the arbitral process;
- Arbitration would be commercially-based, with the arbitrator (drawn from an approved pool) appointed by mutual agreement of the parties, but with provision for imposition of an arbitrator where there is no agreement;
- The framework would be designed for expeditious resolution of the dispute with provisions to avoid delay and gaming. Structures such as ‘final offer arbitration’ would be considered for inclusion;
- The decision of the arbitrator would be binding on both parties;
- Oversight and maintenance of the framework will be required, including in relation to procedural rules, pricing principles and the power to appoint an arbitrator to a dispute in the absence of agreement between the parties;
- The ACCC is the logical institution to undertake the oversight role.

As the AAA have pointed out, commercial arbitration is currently already available to airlines and airports under State and Territory laws, in the case of intractable disputes over access or contract terms. However, as the AAA also acknowledge, proceeding down this path relies on both parties to the dispute agreeing that independent arbitration is desirable, and to be willing to bear the costs. Unsurprisingly, there are no known cases where an airport has proposed or agreed to such arbitration or any other kind of expert determination. We have therefore proposed, in the above characteristics, that either party could trigger the process.

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.

However, as noted by Vertigan, where commercial processes are working effectively, resorting to arbitration should rarely be required,¹⁰⁴ and this has been the experience with the new gas rules. As A4ANZ has said previously, the framework would be designed to incentivise parties to negotiate, rather than relying on arbitration, which accords with international experience.

Arbitration process

The framework characteristics outlined above would provide an effective and streamlined mechanism to resolve disputes according to agreed-upon standards, including existing pricing principles that are already in force, or equivalent principles,^f and criteria which guide arbitrators in making their decisions. Mandating these principles would lend greater clarity and efficiency to the operation of the framework.

^e Adapted from the Vertigan report

^f In an airport specific regulatory framework, this could be the existing *Aeronautical Pricing Principles*

Appropriate criteria in the airports' environment may include aspects such as: reflecting outcomes of a workably competitive market, assessments of cost benefit, cost effectiveness, investment efficiency, and a rate of return which is commensurate with prevailing market rates. Given these criteria guide the decision-making, further direction would be necessary in the potential scenario of neither party's offers being within agreed parameters. The Options Paper suggested that if the arbitrator believes a fair and reasonable settlement lies between the disputant's final offers, the rules of final offer arbitration (FOA) are used, and if it falls outside the range provided by the final offers, conventional arbitration rules are used.¹⁰⁵

It should be noted that A4ANZ is not opposed to the use of conventional or combined arbitration, where appropriate, and believes that, in addition to clear objectives and principles, the key to any arbitration framework is ensuring there are appropriate provisions regarding timeframes, information disclosure and mandated pricing principles.

Regime coverage

Following our review of submissions and discussions with key stakeholders, A4ANZ explored potential legislative mechanisms which could be used to prescribe which airports an industry-specific regulatory regime could cover, to allow for the implementation of a negotiate-arbitrate framework.

It is important to note that the Terms of Reference for this Inquiry did not limit the PC to consideration of matters pertaining to the four monitored airports alone, and, as can be seen from multiple submissions to the Inquiry, monopoly behaviours certainly extend well beyond these airports. It is therefore helpful to again look at how this issue was approached in the gas sector, where the Vertigan Report argued that it was not appropriate for access to dispute resolution to be predicated on whether or not the infrastructure asset was covered by an existing scheme; rather, that *all assets with natural monopoly characteristics* should include such a provision.

We believe, therefore, that the most practical way to implement a proposed negotiate-arbitrate regime for airports may be to start with those under Commonwealth control; specifically, those defined in the Act as *core regulated airports*⁹, with provision for inclusion of further airports as required.

Given the issues of monopoly behaviour are clearly not limited to the airports listed above, and there is sound rationale and precedent in the gas pipeline sector, there remains a strong desire to expand coverage of such a regime to airports not on federally-leased land. Powers could be given to either the Minister or Department Secretary to designate airports so they come under the regime's coverage, similar to powers contained in other legislative instruments, e.g. *Crimes Legislation Amendment (Police Powers at Airports) Bill 2018*¹⁰⁶ and *Aviation Transport Security Act 2004*.¹⁰⁷

Regardless of the mechanisms used, it is for the benefit of efficiency, competition, and the community generally that there exists an appropriate framework to enable disputes between airport access providers and access seekers to be resolved within an appropriate framework.

⁹ Core regulated airports include the following: Sydney, Western Sydney, Melbourne, Brisbane, Perth, Adelaide, Gold Coast, Hobart, Launceston, Alice Springs, Canberra, Darwin and Townsville.

WOULD CHANGES TO THE REGULATORY MODEL HARM INVESTMENT?

A common contention running through many of the airport and investor submissions to the PC is that continued investment in airports would be at risk if the current light-handed airport regulatory regime was replaced by a more rigorous economic regulatory approach.

Aside from this being an admission that investment is effectively being paid for by the airlines and other airport users, there is a large question mark over whether current settings incentivise efficient investment – submissions from airlines and other airport users suggest otherwise.

To explore and address these claims of investment risk, A4ANZ engaged Frontier Economics, who consider this argument to be simplistic and largely without basis – as high levels of investment can, and have been, achieved in regulated industries. Frontier’s full analysis is included in **Appendix C**, however the main points are that:

- under current regulatory arrangements, it cannot be presumed that airports are investing the right amount on the right things, as airports face many incentives to invest inefficiently;
- it is the specifics, rather than the existence of a regulatory regime, that affects investment. Experience has shown that carefully designed regulatory regimes can and do provide appropriated incentives for investment whilst protecting against the misuse of market power; and
- dismissing the case for regulation on the basis of the *possibility* it might impact on investment is short-sighted – rather more careful consideration should be given to the specifics of the regime adopted.

Effective regulation delivers investment and economic gains

High levels of investment can, and have, been achieved in sectors subject to effective or changed regulatory regimes, including, but not limited to, financial institutions in Australia and other airports around the world.

The AAA’s submission notes that capital expenditure (per passenger) incurred at Australian airports is broadly consistent with peers.¹⁰⁸ In other words, Australian airports have been investing to a similar degree as other international airports on a per passenger basis. These international airports are under different, and often heavier-handed regulatory arrangements and have equally been investing to keep up with growing demand. This implies the presence of a regulatory regime does not necessarily act as a barrier to investment. The level of investment that has taken place at Heathrow and Changi, which are subject to price and revenue caps respectively, are good examples of this. Heathrow Airport is highlighted as a case study in Box 1, below.

To be clear, A4ANZ is not advocating for more heavy-handed regulation; our proposals simply give effect to a negotiate-arbitrate mechanism for the existing light-handed regime. Economists agree that effective regulation delivers greater certainty and economic gains. As indicated previously, A4ANZ wants to see continued investment in airport infrastructure, and recognises that further airport investment is absolutely necessary given predicted growth.¹⁰⁹ However, investment must be fit-for-purpose, aligned with the needs of airlines and passengers using the facilities, and demand for air services.

Box 1: Investment Case Study - Heathrow Airport

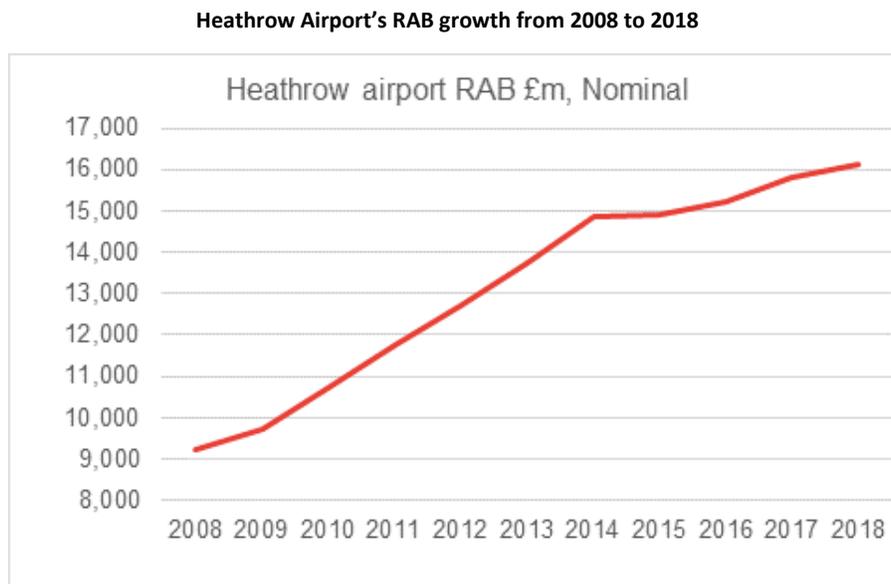
Heathrow Airport provides a helpful case-study of how a privately-owned airport can deliver significant investment under a form of price control.^h

Heathrow is subject to *ex ante* price caps set to recover an efficient level of future expenditure for the airport, based on the airport's proposal and submissions of users. This requires forecasts of future demand and expenditure which can be complex. The forecasts included in the regulatory determination are informed by "constructive engagement". Under this process airports and airlines directly negotiate with each other to determine traffic forecasts, service requirements, and investment programmes.

The AAA's submission notes that since 2002 Australian airports have invested over \$15 billion in infrastructure, of which around \$10 billion has been in aeronautical assets¹¹⁰. They further suggest that this investment is a direct result of the current light-handed airport regulatory regime. While these figures appear sizeable, as highlighted in the AAA's own submission, for all but one Australian airport, capital expenditures per passenger are *higher* at Heathrow Airport, which is subject to more heavy-handed regulation.

Irrespective of whether Heathrow's regulatory regime is viewed as a success, it is clear that it has enabled significant investment to occur.

Furthermore, as demonstrate in the figure below Heathrow's Regulatory asset base has grown significantly by 174% from £9,233 in 2008 to £16,108 in 2018. This implies that investment at the airport has involved major augmentations and not just capital expenditure to maintain and replace the existing assets.



Source: RAB data published by Heathrow Airport¹¹¹

^h A4ANZ uses this an example of investment under different regulatory models, not to advocate for price control which we have explicitly said does not represent good policy in the Australian airports environment.

WILL CONSUMERS REALLY BENEFIT FROM CHANGES?

As A4AZ noted in our original submission, historically, when airlines have been able to reduce costs in any part of their business they have reinvested in improving the consumer experience, including: reducing fares, increasing capacity on routes, renewing fleet capacity, preserving essential regional air services, collaborating with airports to progress innovations in customer experiences, improving domestic and international service levels and technological innovation; and other new and important initiatives such as pilot academies.

A4ANZ acknowledges that Houston Kemp, at the direction of the AAA, have provided a critique of some of the assumptions underpinning analysis included in A4ANZ's original submission to the Productivity Commission – including the extent of cost pass-through.¹¹² While these assumptions were in fact acknowledged in the initial analysis, Frontier Economics has now provided additional commentary regarding Houston Kemp's critique – this is included in full in **Appendix D**.

While Frontier agree with Houston Kemp that there is no economic theory that supports the prior assumption about the extent of cost pass-through, it is important to note that Frontier's economic evaluation report states that the exact amount of pass-through will depend on the nature of demand and the competitiveness of the air travel on any route.¹¹³

Frontier further note that whilst assumptions about cost pass-through are important when formally assessing pricing outcomes for the purpose of a market power assessment, this is less critical when used as an input into the connectivity analysis. For example, if it is assumed that there is zero pass-through of airport charges to airfares, this would still impact on an airline's costs on any route i.e. a rise in airport charges will increase the fixed costs of airlines, making routes less viable. Similarly, if it is assumed that there is 100% pass-through of airport charges to airfares, the rise in airport charges will reduce demand and therefore make routes less viable.

Given the primary purpose of Frontier's original analysis was to explore connectivity and determine route viability, any fall in airport charges (as a result of changes to the regulatory regime) could be viewed as beneficial to passengers, if it drives new connectivity, irrespective of whether this comes through lower fares or through lowering the fixed costs of airlines.

These conclusions are supported by international evidence, for example, in the UK and Europe, where effective regulatory frameworks have led to substantial consumer benefits.¹¹⁴ We expect similar effects in the Australian environment, which were documented our original submission.¹¹⁵ Even with the revised, considerably more conservative estimates, Frontier estimate that the reforms would produce a benefit:cost ratio of 14:1 (**Appendix D**). Clearly, there is a far greater cost to society if we maintain the status quo.

CONCLUDING COMMENTS

Our objective is that this submission returns our collective focus once again to the Government's policy objective: that the framework put in place for the economic regulation of Australia's monopoly airports facilitates commercial negotiations.

As IATA notes, successful airport privatisations should deliver the following:

- A more efficient, cheaper and better service for passengers and airport users;
- Cost effective and fit-for-purpose investment;
- Normal market-based returns on capital for investors; and
- Economic benefits for local community and the wider economy

We cannot expect these objectives to be met if we simply "set and forget" regulatory settings on a regulatory model. This Inquiry is timely, because it is now abundantly clear that these objectives are not all currently being met.

All parties to the Inquiry have acknowledged, at some level, the challenges of commercial negotiations between airports and airport users. How we build a regulatory framework to address that is the critical question to be answered.

This submission, together with A4ANZ's earlier submission, puts forward practical, readily-implementable options, for consideration by the PC and others. Not only do the options proposed address the shortcomings of the current model for all airport users, but they reflect global best practice and will deliver critical economic benefits that are currently being lost.

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11 DECEMBER 2018

MARKET POWER AND THE PROFITABILITY OF AUSTRALIAN AIRPORTS - RESPONSE

PREPARED FOR A4ANZ

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1 MARKET POWER AND PROFITABILITY

A response to submissions to the Productivity Commission's Airports inquiry

The Australian Airports Association (AAA) has provided a number of submissions to the Productivity Commission in its inquiry into airport regulation. This has included engaging economic consultants HoustonKemp to examine the extent to which the pricing of aeronautical services by the four airports that are the subject of the airports price monitoring regime — administered by the Australian Competition and Consumer Commission (ACCC) — can be said to reflect the exercise of any market power.¹

HoustonKemp argues that these airports may be assumed to have some market power but are constrained from exercising it. The empirical analysis supporting this finding is based on comparing a series of returns on aeronautical assets with an estimate of the cost of capital for the airports.

This short report responds to the analysis in that submission.

Analysis of airport profitability by the AAA and HoustonKemp

HoustonKemp takes the “structural likelihood” that the airports hold a degree of market power as a given.² HoustonKemp then suggests:

...the examination as to the exercise of that market power principally involves an assessment of whether prices or profits have been significantly above the workably competitive level over a sustained period. Our review of the literature shows that there are number of potential pitfalls to which careful attention needs to be given in any profitability analysis directed at the assessment of market power.³

The most important of these pitfalls are said to be difficulties in estimating an airport's cost of capital (WACC), returns that vary with the capital life cycle, and the need for any finding of rates of profit above normal rates of return to be both significant and sustained for an inference as to the exercise of market power.

Houston Kemp's empirical assessment of airport market power relies primarily on an analysis of airport profitability for aeronautical services. This is derived as the annual rate of return on assets (EBIT as a percentage of the aeronautical asset base) for each of the four price monitored airports, using ACCC data. This is benchmarked against an estimated range for the pre-tax nominal WACC, based on

¹ HoustonKemp, *Assessing market power in aeronautical services: a report for the Australian Airports Association*, September 2018, (HoustonKemp report)

² HoustonKemp report, p. i.

³ *ibid.*

HoustonKemp's view of the conventional regulatory approach to WACC determination over the monitoring period.

When measured returns are assessed on this basis, HoustonKemp concludes that:

Our analysis of reported rates of return in the provision of aeronautical services by the four airports show that average returns have in each case fallen within the average lower and upper bound estimates of the cost of capital for a benchmark Australian airport. Two airports – Perth and Melbourne – have reported rates of return below the mid-point of the 15-year average lower and upper bound WACC, while two others – Brisbane and Sydney – have reported rates of return above the fifteen year mid-point of those averages...

...These results strongly support a conclusion that none of the four airports can be said to have set prices or achieved levels of profit that can be said to reflect the exercise of any market power.⁴

Our analysis differs in important respects

We agree with HoustonKemp on certain aspects of the appropriate approach to assessing whether airports are exercising market power. We agree that a comparison of some measure of return against the opportunity costs of capital invested in the airport's operation is required, and that while there are dangers in drawing conclusion on profitability over short periods, a sufficient period has passed for the airports' rates of return to be usefully analysed. Unlike HoustonKemp, however, our analysis of market power and excess returns indicates that there is strong evidence that the major Australian airports have, in fact, exercised their market power.

Both of our analyses rely on the ACCC's monitoring data as a key input, and for the purposes of this analysis, we adopt HoustonKemp's WACC parameters to better isolate the differences in our approach.⁵ For completeness, we note that HoustonKemp's WACC estimate is conservative – as airports would be expected to have an equity beta and overall cost of capital that is below that of the average listed firm.⁶ This is because the airports considered have market power and control access to monopoly infrastructure, are subject only to price monitoring, and are generally considered safe investments akin to other utility infrastructure.

Two key points of difference in our approaches remain:

- First, we consider returns across the airport, rather than restricting analysis to aeronautical services. Our approach correctly accounts for market power that is held by airports in non-aeronautical services and avoids arbitrary cost allocations that reduce returns attributed to aeronautical services. See **appendix A** for further details.
- Secondly, we estimate excess returns using several methods, including the most theoretically appropriate measure of excess returns – the internal rate of return or (equivalently) the net present

⁴ HoustonKemp report, p. 4.

⁵ HoustonKemp's WACC estimates are reported in section 4 of its report. While we are able to replicate the lower bound WACC using the inputs supplied, our replication of the upper bound results in values that are around 1.5% less than those reported.

⁶ With an equity beta of over one and using BBB-rated debt as benchmarks, the estimated WACC is above that of the average market listed firm. We estimate the cost of debt for a firm that has the average risk of listed entities would have gearing (debt / (debt + equity)) of 41 per cent, using data over the 2017 calendar year. Using May 2018 data, we estimate that the average firm credit rating (weighted by market capitalisation) is most likely between A- and BBB+.

value. This analysis uses cash flow data and opening and closing asset values. We cross-check these results against other measures including return on capital employed, assets and equity, and margins. Further details of this approach and other measures of profitability are described in **Appendices B and C**.

In all cases we find three of the four monitored airports have persistently earned returns above the cost of capital estimated by HoustonKemp, while Australian airport margins are the highest in a broad international sample which corroborates the main results.

Key findings – internal rates of return

We first estimate internal rates of return (IRR) for the monitored Australian airports using cash flow data derived from the ACCC's monitoring report, and opening and closing asset values (a "truncated" IRR – see **Appendix C**).

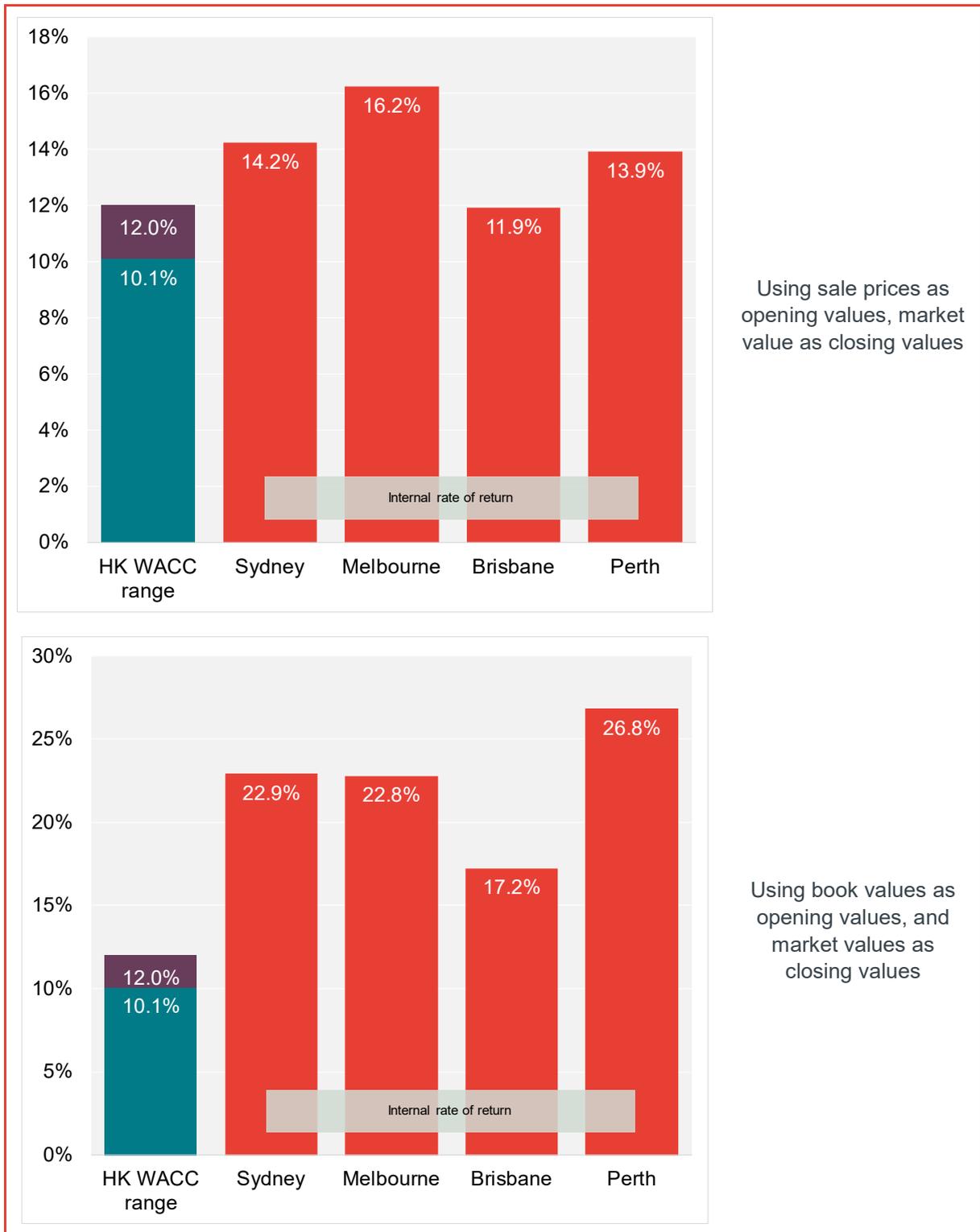
Our key findings from this analysis are as follows:

- Sydney, Melbourne and Perth airports have been exercising market power, reflected in economic returns to the owners that are well in excess of the cost of funds estimated by HoustonKemp.
- For Brisbane airport, economic returns to the owners are likely to be in excess of the cost of funds during the post-privatisation period, reflecting the exercise of market power. It is only at the top end of HoustonKemp's range that returns would not be considered excessive.
- The Government has likely captured benefits from the exercise of market power through the sale of the leases, reflected in sales prices well above the book value of assets. Returns are excessive across all airports if we include these returns in calculations.⁷

Figure 1 illustrates these results.

⁷ Arguably, the later revaluations of assets undertaken by the airports were reflected of these sale prices. If the revaluations were netted off the revenue sought to be earned from those assets, it would have prevented the airports from windfall gains at the expense of its customers, but this did not occur.

Figure 1: Results of IRR analysis and comparison with cost of capital



Source: Frontier Economics calculations based on HoustonKemp WACC parameters for all years

Notes: IRR uses nominal, pre-tax cashflows, over the period 1998-2017 for Melbourne, Brisbane and Perth, and 2002-2017 for Sydney. WACC estimated is nominal, pre-tax and averaged over the same periods. The upper bound of the WACC range corrects for an assumed error – see Appendix D for further details.

We further estimate the present dollar value of the excess returns accruing to the airports' owners. This suggests that the dollar value of the overcharging to airport users (including both airlines and other users) is large. In net present value (NPV) terms in years of the sales, the excess return is more than \$3 billion, while taking into account the time value of money and bringing the value of excess returns to 2017 dollars shows the likely value of excess returns at around \$7 billion.

Key findings – other profit measures

The results from the internal rates of return are corroborated by our other analyses of profit including returns on assets, capital employed, or equity, and comparative margins.

The other profit measures must be treated with more caution, because they are more reliant on accounting data relating to asset values. Airports were able to re-value assets to reflect higher earning potential, but with the effect of lowering measured accounting returns, as discussed by the Productivity Commission in 2006.⁸

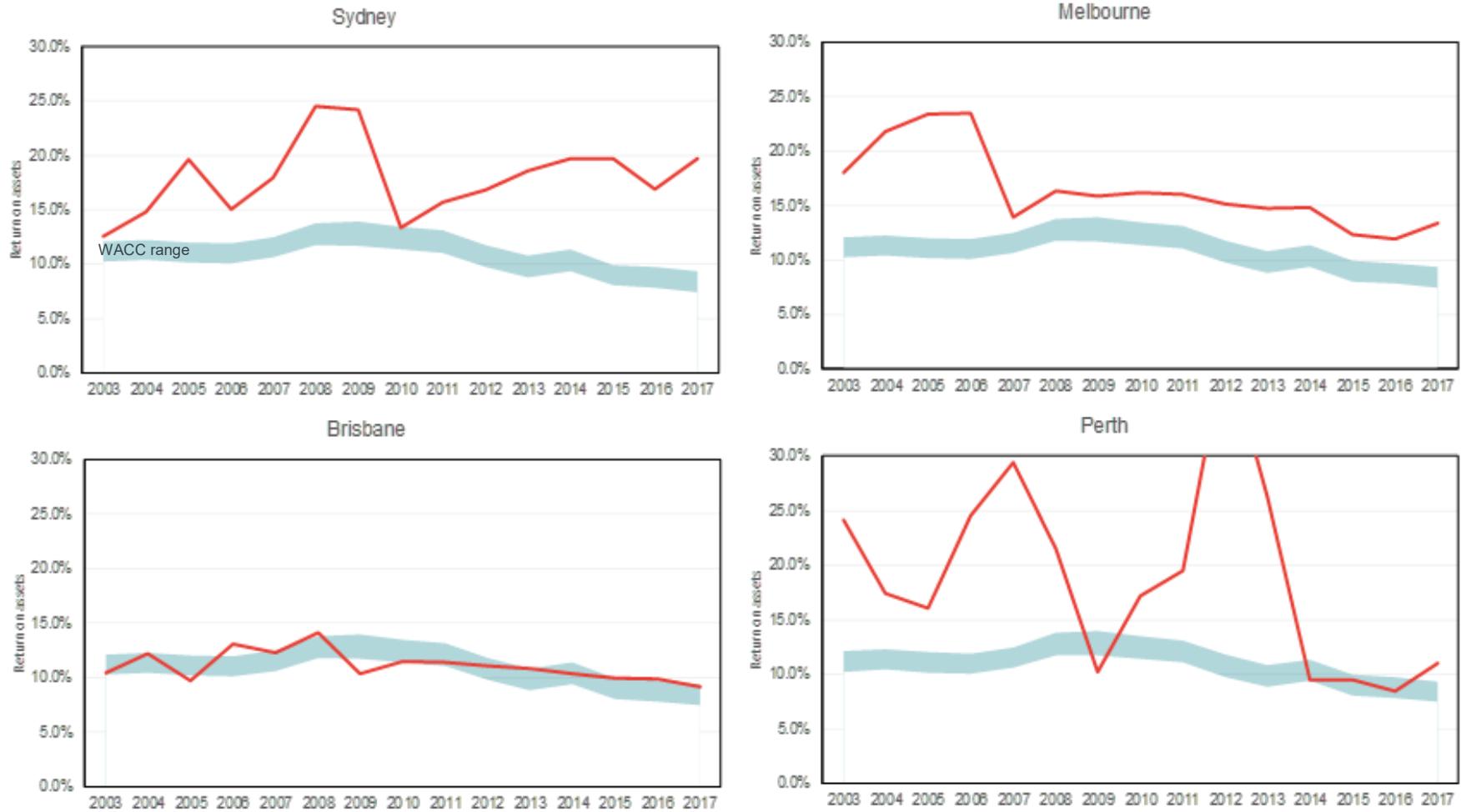
To compare HoustonKemp's results with our own, we use results from the 2003 financial year onwards, even though revaluations of aeronautical assets only ceased in 2005 (as a result of the Productivity Commission's 2006 recommendations).

We first report return on assets⁹, which is the sole measure identified by HoustonKemp. We compare returns compared to the upper and lower WACC bounds.

⁸ The Commission noted that: "Since acquiring the leases, most of the price monitored airports have revalued their above ground assets, sometimes significantly... one important effect is to provide a possible justification for higher charges over time... From an efficiency perspective, the case for sanctioning higher charges based on changes in the 'optimised replacement value' of above ground assets, or the value of land in alternative uses, is weak. Productivity Commission 2006, *Review of Price Regulation of Airport Services*, Report no. 40, Canberra. See p. XXII.

⁹ We follow the ACCC's monitoring reports in using tangible, non-current assets.

Figure 2: Return on assets and comparison with WACC range, 2003-17

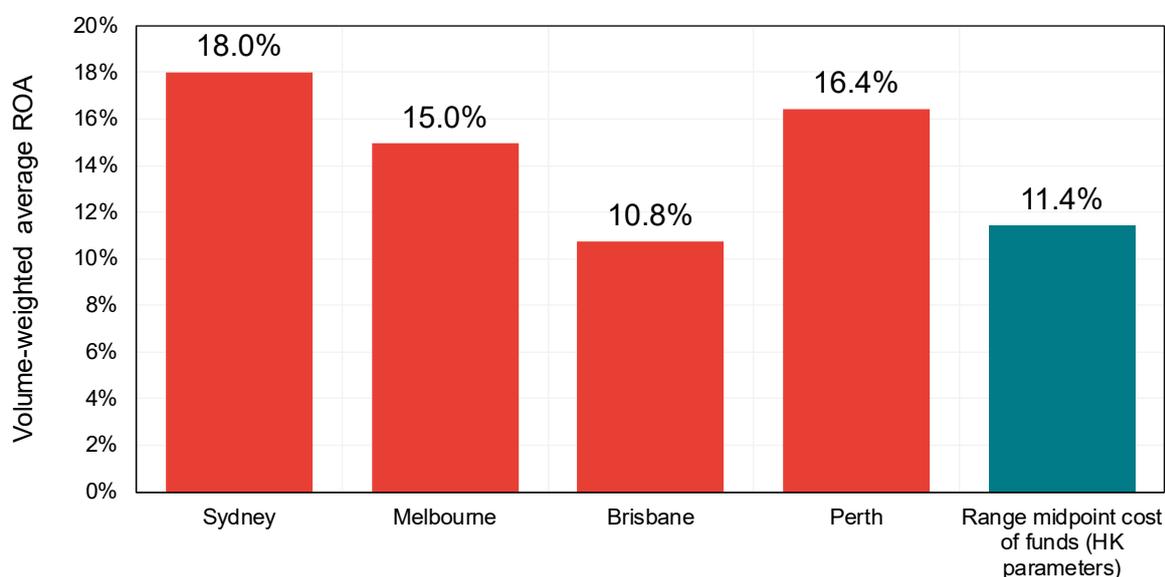


Source: Frontier Economics calculations, using ACCC monitoring data and HoustonKemp WACC parameters (see Appendix D)

Sydney and Melbourne Airports are above the WACC range in each year. Only Brisbane is generally within the WACC range.¹⁰

Perth's average returns are also significantly higher than the WACC range, with more variability. Recent results are within or close to the WACC range as Perth has revalued non-aeronautical assets (which is not prohibited under the ACCC's monitoring). In particular, Perth increased the value of its non-aeronautical assets in 2012-13, which was accounted for as revenue in the accounts. This resulted in a large spike in returns in that year (as shown in the chart), while it also has the effect of reducing future returns because profits are divided by a larger number. Taking an average across the surrounding years indicates average returns are well in the excess of the WACC range. Averages across the period are further highlighted in **Figure 3**.

Figure 3: Return on assets, average 2003-17



Source: Frontier Economics calculations on ACCC monitoring data, HoustonKemp WACC parameters (see Appendix D)

We have also reviewed return on capital employed and return on equity, which are also common measures of economic profits. These figures corroborate the findings above, and in **Appendix D** we also highlight an independent Grattan Institute analysis which further supports the excessive return finding.¹¹

High returns are persistent

In 2006, the Productivity Commission stated that one must be careful not to attribute excess returns to good fortune:

¹⁰ It is also necessary to take into account that Brisbane increased the value of its aeronautical assets by \$275 million between 1998-99 and 2003-04. This has the effect of depressing reported returns earned.

¹¹ Sydney Airports monitoring results have proven particularly problematic to analyse. We are unable to report a return on capital employed or a return on equity for Sydney Airport. This is because Sydney Airport reports after-tax losses and negative net assets in the ACCC's monitoring accounts in recent years.

A more rapid than expected growth in the market, as appears to have occurred at most of the monitored airports, will result in higher than expected revenues and returns because costs do not increase commensurately. Conversely, had the market grown less than anticipated, revenues and profitability would not have met expectations. It would thus be inappropriate to automatically infer misuse of market power from an outcome favourable to the airports that results from unforeseen circumstances.¹²

The key test of the good fortune argument is persistence: a tendency for returns to return to “normal”. In our view, a period of more than 10 years since the Productivity Commission made its observation is sufficient time to draw conclusions on persistence. Our analysis has shown that while returns for Melbourne, Sydney and Perth Airports have clearly been above those required to service the cost of funds, there is no general tendency in the more recent data (return on assets) for such returns to become more normal.¹³

Key findings – comparative margins

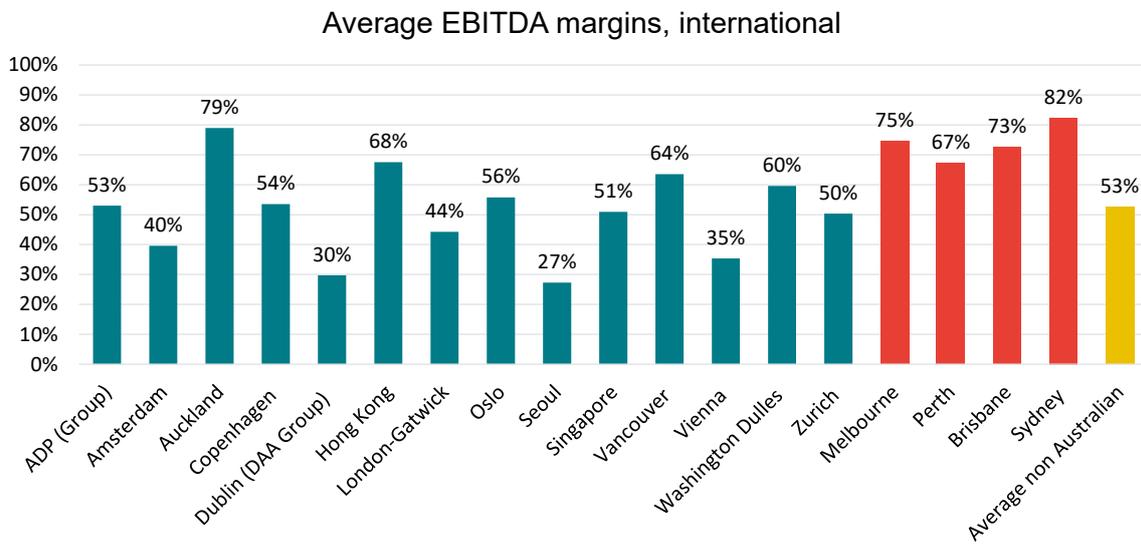
In the preceding analysis our benchmark was estimates of the airports’ cost of funds. An alternate benchmark that can be used is the returns earned by airports that are subject to either competition, or effective regulation.

A comparison of margins has been undertaken as a cross-check on our main results. This comparison indicates that all of the monitored Australian airports have average EBITDA margins well above the average margin calculated across a sample of comparator airports (see **Figure 4**). Sydney earns the highest margin of any airport in our sample (more than 8 of every 10 dollars earned contributes to profits), and the other airports are all in the top 6.

¹² Productivity Commission, *Review of Price Regulation of Airport Services*, December 2006, p.28.

¹³ Noting that Perth Airport’s move into the WACC range is affected by its asset revaluation.

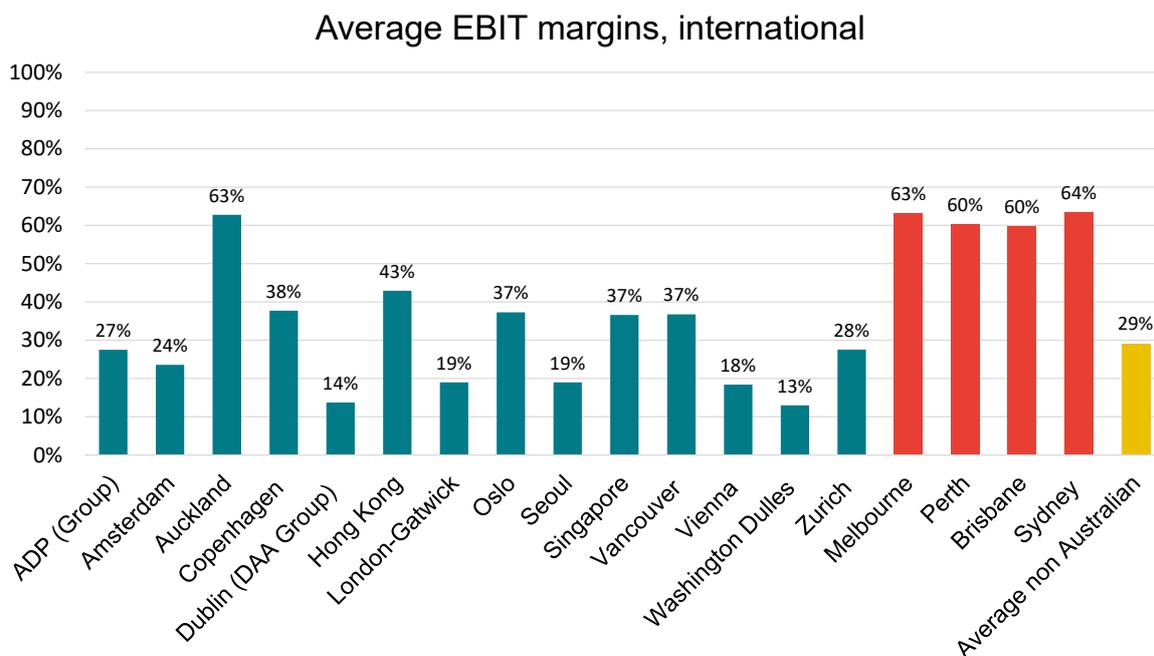
Figure 4: Comparison of EBITDA margins, 2008-2015



Source: Frontier Economics

To further assess whether differences in EBITDA margins could be due to different stages of the investment cycle (i.e. high investment leading to high capital charges), we also calculated EBIT margins for the same airports. This is reported in **Figure 5**.

Figure 5: Comparison of EBIT margins, 2008-2015



Source: Frontier Economics

It is apparent from these data that:

- average EBIT margins at all the Australian monitored airports – at between 60-64 per cent – are extraordinarily high by international standards where the average is 29 per cent). Only Auckland – another airport subject to price monitoring – has margins comparable to the Australian airports.
- the high EBITDA margins cannot obviously be justified by comparatively high capital investment, as EBIT margins are also relatively high. Sydney's higher relative depreciation charges narrow the gap with other Australian airports, but still leave its margins the highest in the comparator set.

We consider that these comparisons provide further support for the conclusion that the earnings of the Australian airports are consistent with the exercise of market power.

In the following appendices, we provide further detail about the derivation and utility of our results:

- **Appendix A** identifies why profits should be measured across aeronautical and non-aeronautical activities
- **Appendix B** discusses the methods of profit assessment used in this report
- **Appendix C** provides further details on the use of the truncated IRR method
- **Appendix D** identifies the data we use to derive our results, including the WACC
- **Appendix E** provides further detail on the use of comparative margins across airports
- **Appendix F** highlights the results of the Grattan Institute report on profitability across Australian industries, including airports.

A PROFITS ARE MEASURED ACROSS THE AIRPORTS ACTIVITIES

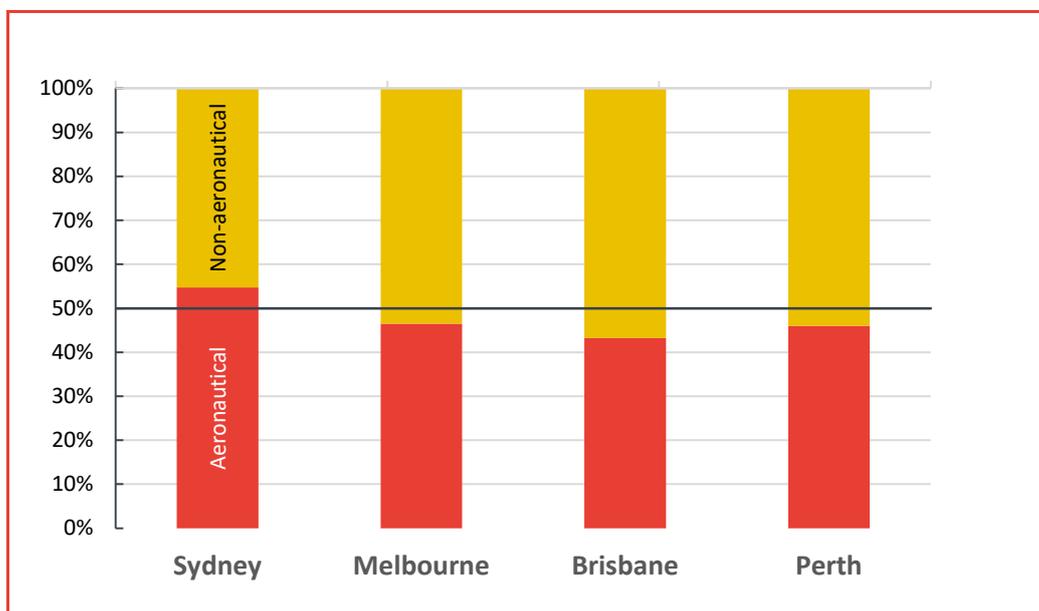
The balance of aeronautical and non-aeronautical revenues

Airports produce a number of different services that are supplied to different users. The key services they provide include:

- aeronautical services, such as access to runways, terminals and other airside infrastructure. These services are provided chiefly to airlines.
- landside access to the airport, via roads, parking and loading spaces. These services are provided to airport users, car hire companies, and transport providers (such as taxis)
- retail tenancies. These services are provided to retailers which provide services to airport users.
- property services. These services are provided to entities that use the airport for business operations, such as logistics companies.

An example of how the revenues of airports derive from different sources may be shown through an examination of ACCC monitoring reports. These indicate a similar pattern of non-aeronautical revenues being around 50% of total revenues.

Figure 6: Share of aeronautical and non-aeronautical revenues, FY2015-16



Source: ACCC monitoring reports

Airports as a platform

The demand for the airports' services is interdependent: the more flights to the airport, the more passengers; the more passengers, and the more retail services consumed. This interdependency indicates that the analysis of two-sided markets may be relevant to airports:

Two-sided markets involve two distinct types of users, each of whom obtains value from interacting with users of the opposite type over a common platform. In these markets, platforms cater to both types of users in a way that allows them to influence the extent to which cross-user externalities are internalized. Rochet and Tirole (2004) offer a more precise characterization.

Examples include academic journals which cater to readers and authors; airports which cater to airlines and passengers; ...¹⁴

Wright's characterisation of the functioning of airports is apt; but it is rather too simple. Airports also cater to car-hire companies, retailers and ground transport providers. That is, an airport might be better characterised as a multi-sided platform rather than a two-sided platform.

One characteristic of multi-sided markets is that the structure of the prices charged by the platform (in this case, the airport operator) takes account of the interdependencies among the demands of the various groups which are served by the platform.

Wright points out that, because of the interdependency of prices in a multi-sided market, one cannot draw any implications concerning market power from examining the relationship between a price and its marginal cost. He states:

To draw sensible inferences about (harmful) market power through price cost margins, loosely speaking one would need to demonstrate that the sum of fees to [both groups served by the platform] could be profitably raised above the costs of providing the service to [both groups served by the platform].¹⁵

Indeed, he states as one of the eight fallacies that arise from using one-sided logic in two-sided markets that "a high price-cost margin indicates market power".¹⁶

All of the airports services should be considered in profitability analysis

The corollary of the above is that to draw sensible inferences about market power from profit margins, it is necessary to consider the revenues and costs from all services provided by the airport. In other words, the extent to which airports generate monopoly profits should be assessed with respect to the whole of their operations.

In a regulatory context, this is generally referred to as assessing a single till. As Malavolti explains, single-till regulation is preferred because the regulation of total profit of an airport is consistent with the

¹⁴ Julian Wright, "One-sided Logic in Two-sided Markets", *Review of Network Economics*, Vol 3, issue 1, March 2004, p 44.

¹⁵ Julian Wright, "One-sided Logic in Two-sided Markets", *Review of Network Economics*, Vol 3, issue 1, March 2004, p 48.

¹⁶ *ibid.*, p 47.

airport taking into account the externalities that exist between retailing and aeronautical services – and, indeed, of services provided to other groups of customers.¹⁷

In the context of estimating service profitability, the same considerations apply. That is, if the airport takes into account the inter-dependencies between customer groups in its pricing, then it is effectively meaningless to consider the profits of “aeronautical” services charged to airlines, and “non-aeronautical” services charged to other airport users.

A better approach to recognise that competition in such markets will lead to normal profits being earned *across both sets of customers*, with the total marginal revenue from expanding passenger volumes equal to the total marginal cost. Put another way, there is simply no reason to believe that determining whether there are excessive returns from providing aeronautical activities should involve a comparison of the costs of aeronautical services with revenues from aeronautical services. Airports may quite rationally charge prices that result in the under- or over-recovery of the incremental costs of aeronautical services, as this can increase their profits overall. Ultimately, this is a decision made by an airport contingent on the relative service elasticities that it faces.¹⁸

In summary, the total profits of the airport should be considered as this is the only sensible comparison by which one can measure the exercise of market power

¹⁷ Estelle Malavolti, “Single Till or Dual Till at Airports: A Two-Sided Market”, Paper 14 (2014) Document de travail GREDEG at: <http://gredeg.cnrs.fr/working-papers.html>.

¹⁸ A focus on the relationship between price and cost on an airport’s aeronautical activities may be appropriate if (a) the extent of complementarity between an airport’s services is weak and (b) returns on other activities are constrained by competition. In these circumstances, a finding that returns on aeronautical activities are moderate with respect to aeronautical costs would have some meaning. However, we have no evidence that this is true. Moreover, were it true that returns from other activities were constrained by competition, a comparison of total returns with total costs will also provide an accurate comparison (that is, adding services that recover a normal return to the profit calculation does not create a risk of error).

B METHODS OF PROFITABILITY MEASUREMENT

Profits as an indicator of the exercise of market power

Airports may exploit their market power in a range of ways:

- raising prices above their average costs of production, including the opportunity costs of the funds which they use in their operations
- under-investing in capacity (which helps raise prices)
- reducing service quality, if this results in a greater cost saving than the value of any output lost
- not being as cost efficient as they could be (the monopoly “quiet life”)

While an airport’s performance can be measured in a number of ways, as suggested by the list above, profitability the most direct single indicator of the exercise of market power.

The purpose of the empirical analysis is to provide an assessment of a factual case – “what has happened” – with a benchmark or counterfactual case – “what would have happened were the airports better regulated, or subject to the pressures of effective competition”.

The most obvious benchmark is against the opportunity costs of funds employed. In the long run, a firm constrained by competition would earn no more than the opportunity cost of funds employed; firms that earned more would attract entry by competitors.

A further useful benchmark might be the performance of similarly-situated airports that are either regulated, or subject to effective competition. We will also analyse these benchmarks to corroborate our principal findings.

Methods of profit assessment — it is best to use more than one method

HoustonKemp summarises a range of economic and regulatory literature on the practical implementation and interpretation of profitability analysis for the purposes of assessing market power. Most of this is relatively uncontroversial. We agree with HoustonKemp that:

- Economics provides a relatively simple expression of monopoly profits; a return on funds in excess of the cost of those funds. While the expression is simple, measurement is complicated because the most appropriate timeframe to measure profit is over the activity’s life, but it would only rarely be feasible to estimate this. As in the case with airports, we are usually more interested in profits during part of the life of an activity.
- The economic and accounting literature provides a number of methods by which the returns (and the cost of funds) may be estimated. Care must be exercised when attempting to measure market power by the rate of return on shareholders’ funds. Financial accounting data has important limitations, and ideally data for many years should be available.

That being said, we do not agree with HoustonKemp that the use of return on assets is the best or only relevant measure of excess profits. In particular, we consider that it is feasible to use the most theoretically-appropriate measure of profits as the principal measure - net present value and internal rate of return. We cross-check this against other measures, including the principal measure identified by HoustonKemp (return on assets).

A significant benefit of this approach is that (for IRR estimates —our principal measure), we are able to use data for the entire period since privatisation, to avoid issues with taking ‘snapshots’ of data and inferring high profits from irregular or unusual events.¹⁹

The following table outlines the approaches that are commonly used to estimating economic profits.

Table 1: Estimating profits or financial performance proxies

APPROACH	DESCRIPTION	DATA REQUIREMENTS	ROLE OF THIS ESTIMATE IN OUR ANALYSIS
Internal rate of return (IRR) ~ net present value (NPV)	Most theoretically appropriate approach. Used to compare against (IRR) or computed with (NPV) a firm's cost of capital.	Relies on: - opening and closing asset values -all cash flows Estimate of airport's WACC over analysis period.	Principal measure
- Return on capital employed - Return on assets	Useful approximation to economic profit. Compared with a firm's WACC. Less reliable over short time periods.	Accounting data including asset values, opex and capex, revenues, plus estimate of airport's WACC. A reasonably long run of data is needed to make this reliable.	
Return on equity	Measures returns to shareholders. Compared with the cost of equity. Can be less reliable if tax / corporate structure issues.	Accounting data on profits, balance sheets, plus estimate of cost of equity	Used as cross-check
Other financial indicators - EBIT margin - EBITDA margin - EBITA margin	Limited economic meaning, but may be easier to compare across airports	Accounting data. Tends to be easier to measure than ROCE, ROA etc. because no measures of asset value required. Requires comparisons across airports.	

Source: Frontier Economics

¹⁹ For example, a spike in demand might result in short run profits that would be expected to decline over time in the market was subject to competition.

C IRR AND NPV ANALYSIS

The most theoretically appropriate measure

The IRR/NPV analysis is the most theoretically appropriate measure of economic profit, and, correctly applied, has the greatest probative value.

Applying the IRR/NPV method is not straightforward in all cases. A key issue is that it requires a full set of cash flows for the relevant assets. However, the IRR can be calculated using periods less than the full life of an asset (a 'truncated IRR'). This takes the value of assets at the start and end of the analysis period into account and allows for the computation of returns earned during the period of cash flows.

Box 1: Truncated IRR

The truncated IRR is calculated using the following relationship:

$$NPV = 0 = A_0 + \sum_{t=1}^{t=N} \left(\frac{C_t}{(1 + irr)^t} \right) + \frac{A_N}{(1 + irr)^t}$$

Where

A_0 = opening asset value

N = time periods

C = (net) cash flows

A_N = closing asset value

irr is the discount rate that produces an NPV of 0.

Where a different WACC applies each year (for an NPV calculation, or to compare the irr to the average WACC over the period), then the cash flows may be discounted using these different rates.

An example of how we have applied this method is described in **Box 2**.

Box 2: Example of NPV/IRR with truncation

We further explain how the NPV / IRR is applied over a truncated period in the following example.

Assume an asset is acquired for \$100, cash flows are expended and received for 6 years, and the asset is sold at the end of the sixth year for \$50. With annual net cash flows of \$20, the calculated ('truncated' IRR) is 13%. This is equivalent to an NPV of \$0 at 13%. This figure can be compared with the entity's (or project) cost of capital to assess whether excess returns have been made.

	CASH FLOW PERIOD						
PERIOD	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
VALUE OF ASSETS	100						
CASH INFLOW		70	70	70	70	70	70
CASH OUTFLOW		50	50	50	50	50	50
NET CASH FLOW	-100	20	20	20	20	20	20 + 50
IRR	14%						
NPV AT 14% WACC	\$0.00						

In this example, if the firm's WACC (for this project) was below 14%, then excess returns have been earned.

Source: Frontier Economics

To implement this approach for the Australian airports, we need cash flow data for the airports, and opening and closing asset values. We have cash flow data from the ACCC's airport monitoring accounts for the period 1997-98 to 2016-17.

Opening and closing asset values

The values for opening and closing assets in the truncated IRR/NPV analysis requires further consideration. The economic literature suggests a number of possible approaches. One approach says that valuation should be based on the notion of "value to the owner". This principle requires assets to be valued at the minimum loss that a firm would suffer were it deprived of the use of that asset.

For example, if a firm were operating in a competitive market, then it would be appropriate to value assets on a "modern equivalent asset" basis. This is akin to the replacement costs of the assets (where what is replaced is the service functionality).²⁰ This is because a firm operating in a competitive market could expect to earn no more than the (optimised) replacement cost of assets – earning more than this would attract entry.²¹

Where we are interested in assessing profits in situations of strong market power, there are some further considerations which influence our choice of valuation method:

²⁰ This also assumes that the firm would replace its assets if deprived of them. In some instances, firms may not replace their assets because the cost of them could not be recovered, and the assets should be valued at their recoverable value.

²¹ This is indeed the basis for Tobin's q; a well known indicator of market power. This measures the relationship between the measured market value of assets and the MEA of assets used. A measure of >1 is indicative of market power.

- We want to avoid a situation where high returns are built in (capitalized) into the opening values for assets. While this would be an appropriate measure of the returns to the acquirers of the airport, it would understate returns earned during the period by the airport.²²
- Historic cost or book values for assets as the opening values would be appropriate if this is the likely amount that would be recoverable from users (and so could form the basis for the value to the owner).²³ For example, firms regulated using building-block style regulation essentially recover the historic cost of investments (so long as these are considered efficient), with a suitable return on capital invested. Depreciated optimised replacement costs might also be suitable for this purpose.
- The primary purpose of this report is to assess the extent to which Australian airports have been able to exercise market power following the removal of formal economic regulation and price control. In order to estimate the effect of the removal of price control we have to make some assumptions of the period over which it will be removed. We assume that the current regulatory arrangements will continue indefinitely. For this reason, the closing value of the assets should be based on market values..

In the absence of a sale value, we can approximate market valuations by adopting methods commonly used in commercial settings. For example, businesses are generally valued using an earnings multiple, or a single stage or multi-stage dividend growth model. A generic form of these models might, for example, divide current earnings by a discount rate, or multiply a form of current earnings by an earnings multiple. These models could be applied to the earnings of the Australian airports and, in the case of Sydney Airport, be checked against sharemarket capitalisation.

Different values allow for different questions to be examined

We resolve the questions around appropriate asset values with reference to the questions that our analysis asks:

- The first question we seek to answer is: have the airports' owners been exploiting market power in earning excess returns?
- The second question is: have users been subject to additional costs resulting from monopoly premiums being built into the sale prices for assets?

In seeking to answer the first question, the most logical perspective is to adopt the market values of assets; that is, to use the lease prices paid at the time of sale, and to use the current market value of the airports.

In seeking to answer the second question, we should seek to use an opening asset value that reflects the costs that would have been recovered from users in the absence of the sale and the building in of the lease premiums. This can be estimated from the book values in the ACCC's monitoring of the airports. Closing asset values should again come from a market valuation; in a monopoly context with high barriers to entry and no expectation of future regulation, there is no reason to think that returns will be capped by the airport's own replacement value of its assets.

²² Consider an example where the market value of assets was \$100, but the replacement cost of assets to the airport was only \$50 (and barriers to entry explain this divergence). In this case, the \$50 excess return will be recovered part during the period of analysis and part reflected in the final asset value. Using a \$100 start value will understate the returns earned – which will be more significant the longer is the series of cash flows.

²³ Under certain circumstances, the historical costs might not be too different from the concept of MEA value. In particular, historical costs would be close to the MEA value where: assets are not subject to significant technological change; assets have not seen significant price inflation or deflation; intangible assets are not significant. All of these factors suggest that historic costs would provide a reasonable indication of replacement costs; airport assets are not subject to technological change, Australia has had a stable macroeconomic environment for many years, and there are few intangible assets associated with airports. The kinds of intangible assets that would be reflected in goodwill relevant to a profit analysis is that acquisition of brand names or other assets. This is not relevant to an airport.

D DATA USED IN THE PROFITABILITY ANALYSIS

ACCC monitoring data

We compiled all of the ACCC's monitoring data, for the period 1997-98 to 2016-17. These data include, for each year and airport:

- an income statement,
- a cash flow statement, and
- a balance sheet.

These statements are split into aeronautical and non-aeronautical costs, revenues and assets.

"Line-in-the-sand" asset values are also reported for Sydney and Brisbane airports for aeronautical assets, following the Productivity Commission's 2006 recommendation that asset valuations be stopped to mask higher returns being offset against rising asset values. Melbourne and Perth do not report such values as they have not undertaken asset revaluations since the date of the "line in the sand" (30 June 2005).

The data that is available allows us to calculate:

- Returns on capital employed
- Returns on tangible non-current assets
- Return on equity
- Margins (such as EBITDA/Revenue)

For our main IRR/NPV analysis, opening and closing asset values need to be determined. We can determine book values for these assets from the regulatory accounts; however, to use market values for assets other sources of data are required.

Key inputs to NPV / IRR calculations

Cash flow data

The ACCC monitoring data provides information on cash inflows (receipts from customers) and cash outflows (payments to suppliers and acquisitions of property, plant and equipment).

The cash flow data are summarised in **Figure 7**. It shows a regular pattern of increases in receipts from customers, and outgoings that are generally steady but spike in periods of investment. This reflects that airports tend to have relatively lumpy investment cycles.

Figure 7: Cash flow data for monitored airports



Source: ACCC monitoring reports

Opening values for assets

Sale prices for the lease of the airports were obtained from the ANAO.²⁴ These are used as opening values when we compare market valuations.

²⁴ https://www.anao.gov.au/sites/g/files/net3721/f/ANAO_Report_1997-98_38.pdf for Brisbane, Perth and Melbourne, and https://www.anao.gov.au/sites/g/files/net616/f/anao_report_2002-2003_43.pdf for Sydney. Accessed February 2018.

Book values for assets were obtained from the ACCC's monitoring data. We did not, however, include goodwill, lease premiums or (in the case of Sydney) asset revaluations in the asset base. These premiums reflect an expectation of future profits, so that if we use these we could falsely conclude that no monopoly returns had been earned. We further considered the use of DORC valuations, but these are problematic because these were only calculated for aeronautical assets (not non-aeronautical assets). However, based on the experience of Sydney Airport, it is not obvious that these values would be materially higher.²⁵

Table 2: Opening asset values

AIRPORT	SALE YEAR	SALE PRICE \$M	OPENING BOOK VALUES ²⁶ \$M
MELBOURNE	1997	1 255	689
BRISBANE	1997	1 314	715
PERTH	1997	631	182
SYDNEY	2002	4 233	2 036

Source: ANAO, *Audit Report No. 43 2002-03*, *Audit Report No. 38 1997-98*

Final values for assets

Final values of assets are estimated market valuations. For Sydney Airport, we are able to rely on a market valuation directly. However, for Brisbane, Melbourne and Perth, which are unlisted, we need to use an approach based on multiples of current earnings, cross-checked against other available data.

A common valuation approach for infrastructure assets is to apply an "EV/EBITDA" multiple. EV or enterprise value is a measure of market capitalisation but also includes net debt so as to reflect that businesses which carry less debt are less risky (for the same market valuation).

The EV/EBITDA valuation approach is used widely to compare airport transactions. For example, information from PWC based on historic European sales between 2009-2014 suggested that airports traded at a value of around 14 times EV/EBITDA.²⁷ However, there is strong evidence which suggests a 14 times valuation is too low in current circumstances of the Australian airports:

- Information from Sydney Airport indicates that it has commonly traded at much higher multiples than 14 times EV/EBITDA. In fact, Sydney's EV/EBITDA multiple has been just above 20 in recent years,

²⁵ The ACCC estimated a DORC value for specialised aeronautical assets as at 1 July 2000 of \$951 million. ACCC, *SACL: Aeronautical pricing proposal decision*, May 2001. This is lower than the book value of property plant and equipment at this time in the ACCC's monitoring accounts (\$1.18 billion).

²⁶ These are adjusted to remove lease premiums (Brisbane, Perth, and Melbourne) and asset revaluations (Sydney).

²⁷ See PWC, *Has the trend line shifted? The impact on airport valuations*, 2015. PWC notes that: "... airport transactions in the past five years indicate that regional airports with higher traffic growth transact within a range of between 14 to 18 times EV/EBITDA, and larger, more mature airports transact within a range of 10 to 14 times EV/EBITDA."

PWC, <https://www.pwc.com/gx/en/capital-projects-infrastructure/pdf/pwc-has-the-trend-line-shifted.pdf>, accessed February 2018

reflecting a multiple of 14 times EBITDA.²⁸ Such a multiple is consistent with (slightly lower than) the sharemarket valuation of Sydney Airport as at June 2017 (when our analysis period concludes).²⁹

- Recent Australian valuations for monopoly assets that are a not under formal price control indicate that much higher multiples would be appropriate: commentators have noted that ports sales around Australia have produced EV/EBITDA multiples of 25 or more.³⁰
- Compared to European peers, Australian airports produce very high EBITDA margins (cash returns) because they are not subject to formal price control as are most privatised European airports.
- Applying a 14 times EV/EBITDA valuation to Melbourne, Perth and Brisbane airports would imply a market value to book value of tangible assets of close to 1 (Melbourne), and below 1 (Perth and Brisbane). This is implausible in the context of other information on margins and returns which we report (e.g relating to returns on assets).

For our market valuations for Melbourne, Perth and Brisbane airports, we apply the same EV/EBITDA valuation as for Sydney airport, using EBITDA, debt and cash figures from the monitoring reports.

We also cross-checked the reasonableness of these valuations against the growth assumptions implied by an earnings growth model.³¹

Table 3: Opening asset values

AIRPORT	AFTER-TAX EARNINGS 2016-17 \$000	DISCOUNT RATE RANGE (POST-TAX) (%)	GROWTH RATE TO MEET ESTIMATED MARKET VALUE (%)	AVERAGE GROWTH IN AFTER-TAX EARNINGS, 2007-16 (%)
MELBOURNE	291,710	7.5-9.0	4.5-6.0	6.6
BRISBANE	167,527	7.5-9.0	4.8-6.3	6.6
PERTH	119,203	7.5-9.0	5.0-6.3	6.9

Source: ACCC Monitoring reports, Frontier Economics calculations

For example, with Melbourne's post tax profit of \$291.7 million in 2016-17, the market valuation we ascribe can be justified if profits grow by 4.5% per year, assuming a 7.5% post tax discount rate, or 6.0% at a 9% discount rate. Melbourne's profits have grown at an average of 6.6% over the last ten years, showing that such a forecast seems plausible.³²

²⁸ Macquarie Equities reports EV/EBITDA of between 21.1 and 22.9 for Sydney Airport between 2013 and 2016 calendar years. See <http://www.macquarie.com.au/dafiles/Internet/mgl/au/apps/retail-newsletter/docs/2017-03/SYD200317e.pdf>

²⁹ Sydney Airport's share price was \$6.94 on June 30, 2016, giving a market capitalisation of approximately \$15.6 billion.

³⁰ <https://www.bloomberg.com/gadfly/articles/2017-10-05/how-pension-funds-are-nickel-and-diming-australia>

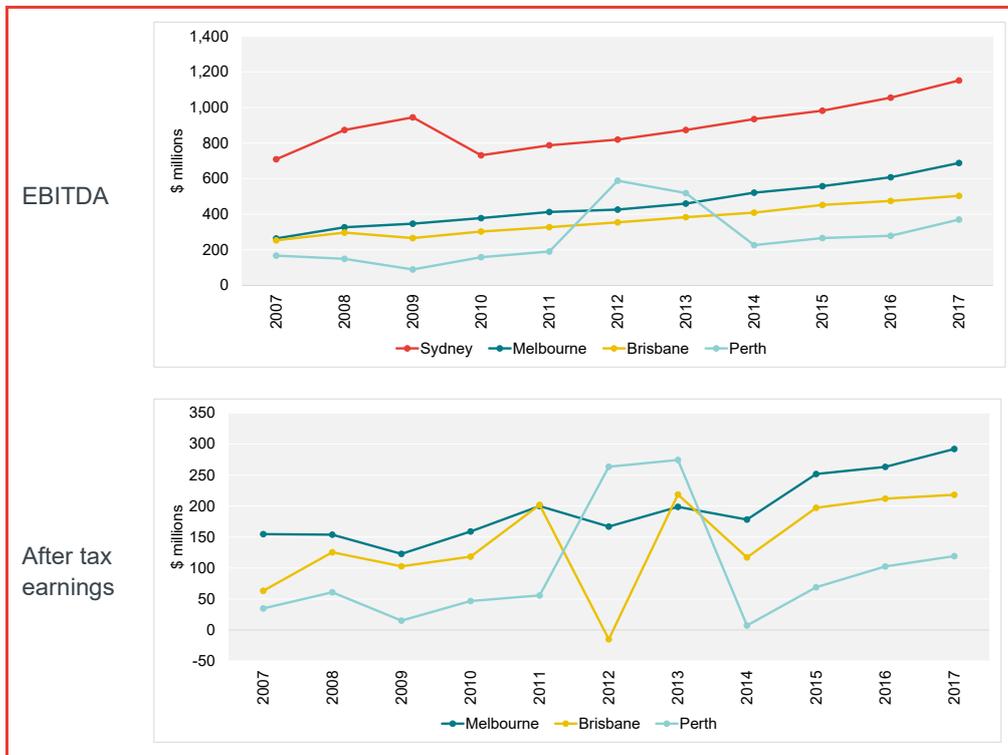
³¹ An earnings growth model values an entity using the following formula:

$$\text{Market value} = \frac{\text{annual earnings}}{\text{discount rate} - \text{growth rate}}$$

³² ACCC monitoring reports, various years. The profit growth is caused by factors pointed to earlier in this report – high fixed costs that do not vary with passenger numbers, and increasing passenger numbers.

The ACCC’s monitoring data also shows that growth in EBITDA and after-tax earnings for the monitored airports is relatively stable, as per **Figure 8**. So, while we use the 2016/17 reported figures for the multiple estimate, it can be observed that these years are not unrepresentative.

Figure 8: EBITDA and after tax earnings for the monitored airports, FY2007-2017



Source: ACCC monitoring reports, various years

Notes: The spike in Perth’s EBITDA/earnings is caused by an asset revaluation for non-aeronautical assets, which is accounted for as revenue

The market values used in the IRR analysis, based on the EV/EBITDA multiple, are reported in **Table 4**.

Table 4: Closing asset values

AIRPORT	FINAL YEAR FY	MARKET VALUE (END FY) \$BN
SYDNEY	2017	15.95
MELBOURNE	2017	9.62
BRISBANE	2017	6.28
PERTH	2017	4.71

Source: ACCC monitoring reports, various years; Frontier Economics

The cost of capital

The determination of whether a company is making excessive returns requires the estimated IRR, or the proxy measures used, to be compared against a suitable benchmark. As we have noted, the estimated IRR can be compared against the entity's WACC over the relevant analysis period.

The output of the WACC calculation is a cost of capital estimate (or range) measured in percentage terms which can be compared with the IRR, also measured in percentage terms. It is important to ensure consistency and comparability between the profitability measure and the benchmark.

In our analysis, we use pre-tax nominal cashflows to calculate the IRR. Therefore, the WACC formulation must also be in a pre-tax nominal form. This is no longer the standard formulation used by regulators when setting a return on capital allowance – a vanilla WACC formulation is usually preferred, with explicit modelling of tax allowances as a separate building block item. The vanilla WACC is lower than a pre-tax WACC, because the cost of equity term within the vanilla WACC formulation is a post-tax rate, whereas it is a pre-tax rate in the pre-tax WACC formulation.

HoustonKemp's WACC estimate is described as follows:

We have adopted a conventional regulatory approach to estimating the reasonable range for the WACC for a benchmark provider of aeronautical services, and a form of WACC that is consistent with the accounts reported by the ACCC in its airport monitoring reports.

HoustonKemp further clarifies that:

The purpose of the estimated WACC that we adopt for this comparison is not to provide an opinion on the likely cost of capital for any particular airport, but rather to identify the range of estimates that is reasonably able to be drawn from material readily available in the context of regulatory decisions on infrastructure pricing.

HoustonKemp uses the following parameter values in its estimation of an upper and lower bound WACC.

Figure 9: HoustonKemp parameter values for nominal, pre-tax WACC

WACC component	Lower bound	Upper bound
Debt proportion	50%	60%
Equity proportion	50%	40%
Nominal risk-free rate (annual average)	10-yr annualised CGS	10-yr annualised CGS
Return on debt (annual average)	10-yr annualised BBB corporate debt	10-yr annualised BBB corporate debt
Market Risk Premium	5.50%	6.50%
Asset beta	0.6	0.7
Debt beta ¹¹¹	0.08	0.13
Equity beta	1.11	1.54
Corporate tax rate	30%	30%
Franking credits	0.50	0.25

Source: HoustonKemp report, p.31.

We concur with HoustonKemp that it is sensible to estimate a range of reasonable WACC values given uncertainty in the true parameter estimates. We do not provide a separate opinion on the appropriate upper and lower bounds, but to highlight the comparisons between our results, we use the same parameter values adopted by Houston Kemp in **Figure 9**.

We do note, however, that there may be an error in the above calculations, as the upper bound appearing the figures in the HoustonKemp report appears around 1.5% higher than could be justified by the inputs above.³³

There are no recent independent regulatory decisions on a suitable WACC range for Australian airports. That said, the approach taken by HoustonKemp is conservative as airports would be expected to have a cost of capital that is below that of the average listed firm. This is because the airports we consider are natural monopolies, subject only to price monitoring, and are generally considered safe investments akin to other utility infrastructure.³⁴ With an equity beta of over one and using BBB-rated debt as benchmarks, the HoustonKemp derived-WACC is above the average market listed firm. We estimate the cost of debt for a firm that has the average risk of listed entities would have gearing (debt / (debt + equity)) of 41 per cent, using data over the 2017 calendar year. Using May 2018 data, we estimate that the average firm credit rating (weighted by market capitalisation) is most likely between A- and BBB+.

Ultimately, even using the range provided by HoustonKemp, there is evidence of excess returns.

³³ For example, if we take the year 2017, we calculate a return on equity of 16% and a cost of debt of 4.6%, which at the given gearing of 60% is a WACC of 9.1%, not around 11% as in the charts. For the lower bound, we calculate a WACC of 7.3% which is consistent with the charts.

³⁴ The WACC for each airport might also be expected to differ, to the extent that differences in passenger types, revenue sources, etc. affected the variability of returns.

E COMPARISON OF MARGINS ACROSS AIRPORTS

Margins corroborate principal results

For further corroboration of our main results, we compare margins earned by the monitored airports in Australia as against a selection of international airports.

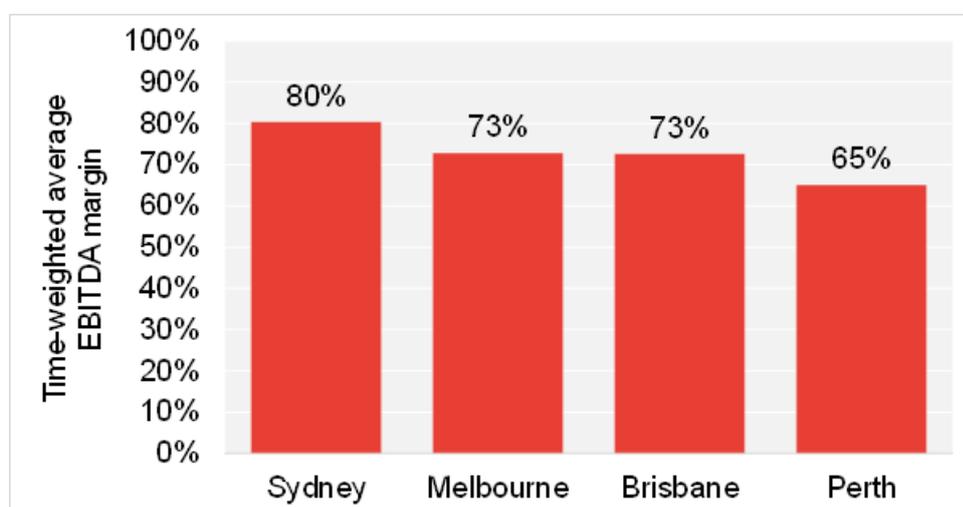
EBITDA margins provide an indication of the cash-earning potential of the business. It is a useful indicator by which to compare airport profitability because it adjusts for airport size (revenues), and is not affected by how airports finance their operations, face different tax regimes, or depreciate their assets.

The primary issues with this profit measure are that:

- suitable benchmark comparators must be found, being airports that are operating in (more) competitive markets, or are price regulated and
- it does not account for the recovery of capital costs, which can distort the results if capital costs vary dramatically. However, this weakness can be overcome if the margins are persistent over a long enough time period.

In **Figure 10** we show margins for the period 2002-16 for the Australian monitored airports. Sydney's returns are the highest of the airports.

Figure 10: EBITDA margins, 2002-16



Source: Frontier Economics calculations

These returns are much higher than average EBITDA margins for firms in the economy³⁵, but this (partly) reflects the capital-intensive nature of airports' operations. To make some judgement about these margins, we need to identify suitable comparator airports. We have considered a range of information, including other benchmarking exercises, to determine suitable comparators. In particular, we considered

³⁵ As an example, Damodaran's dataset indicates United States economy-wide EBITDA margins of around 13 per cent. See: http://people.stern.nyu.edu/adamodar/New_Home_Page/datacurrent.html

a report for Melbourne Airport (Leigh Fisher)³⁶ and a report by PA Consulting for the CAA on Heathrow Airport comparisons.³⁷ Both exercises compared EBITDA margins and included Australian airports in the comparisons. Where possible, we obtained margin data for airports where they were included in either of these studies. This left us with 18 airports (14 other than the Australian airports). Of these airports:

- seven are under some form of price control (LHR, DUB, SIN, VIE, CDG, CPH, ZRH)
- eight are in Europe, four are in the Asia-Pacific region and two are in North America.

In **Figure 4** we reported the average margins for the period 2008-2015³⁸, with the Australian results also included over the same period. The margins illustrate that:

- all of the monitored Australian airports have average EBITDA margins well above the average margin (excluding the Australian airports)
- in comparison to **Figure 10**, it also illustrates that margins are not declining (as average margins are higher over 2008 onwards compared to 2002 onwards)
- Only Auckland airport, which is regulated in a similar manner to the Australian airports, earns margins as high as those in Sydney, Melbourne and Brisbane (with Perth's margin 6th).

To further assess whether differences in EBITDA margins could be due to different stages of the investment cycle (i.e. high investment leading to high capital charges), we also calculated EBIT margins for the same airports.

It is apparent from these data (**Figure 5**) that:

- average EBIT margins at all the Australian monitored airports, at between 60-64 per cent are extraordinarily high by international standards (average 29 per cent). Only Auckland – another airport subject to price monitoring – has margins comparable to the Australian airports.
- the high EBITDA margins cannot obviously be justified by comparatively high capital investment, as EBIT margins are also relatively high. Sydney's higher relative depreciation charges narrow the gap with other Australian airports, but still leave its margins the highest in the comparator set.

We consider that these comparisons provide further support for the conclusion that the earnings of the Australian airports are consistent with the exercise of market power.

³⁶ Leigh Fisher, *Melbourne Airport Performance And Charges Benchmarking Study: Prepared for Melbourne Airport*, April 2011.

³⁷ PA Consulting, *CAA: Benchmarking Of High Level Economic And Financial Metrics Of Heathrow Airport*, June 2017

³⁸ We have insufficient data across all comparator airports for the 2016 year.

F GRATTAN ANALYSIS OF RETURN ON EQUITY

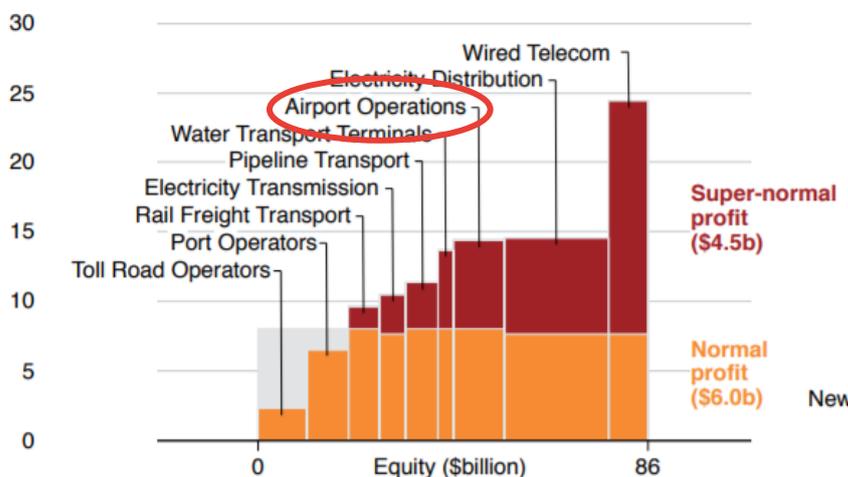
In 2017, the Grattan Institute produced a report on competition in the Australian economy.³⁹ It noted that many people around the world have become concerned that competition is not working as it should. The purpose of the report was to determine whether these concerns were relevant to Australia – in particular, whether competitive intensity is too low in Australia, and is it declining? This included the determination of sectors in which firms with market power earned high profits.

Airports formed part of the “natural monopoly” sector, which was considered “particularly profitable” overall (p. 32). Grattan concluded that “nearly half of returns earned by airport operators were super-normal profits, on average, from 2010-11 to 2015-16.” (p. 32).

The Grattan Institute used as its profit measure return on equity – after tax profits divided by shareholder’s equity. This should be compared with the cost of equity to determine whether returns to equity holders are indicative of the exercise of market power.

As illustrated in Figure 4.4 from the Grattan report (replicated below), post-tax returns of 14.4 per cent compared to a post-tax cost of equity of 8.0 per cent. This converts to a pre-tax return of around 17 per cent. HoustonKemp’s estimated post-tax cost of equity over the same period is around 10 per cent.

Figure 11: Extract from Grattan report



Source: Grattan Institute

³⁹ See <https://grattan.edu.au/report/competition-in-the-australian-economy/> Jim Minifie, Cameron Chisholm, and Lucy Percival. (2017). *Competition in Australia: Too little of a good thing?*. Grattan Institute.

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MEMORANDUM

To: Dr Alison Roberts, Chief Executive Officer
Airlines for Australia & New Zealand

Re: Productivity Commission Inquiry into the Economic Regulation of Airports

Date: 22 November 2018

1. I have been asked to express my views on the Memorandum dated 11 October 2018 prepared by Simon Uthmeyer and Sophia Grace of DLA Piper with respect to criterion (a) of the declaration criteria in Part IIIA of the *Competition and Consumer Act 2010* (Cth) (CCA)¹.
2. The opinion is expressed in that Memorandum that the recent changes to criterion (a)² have not significantly increased the threshold that must be met for declaration of services supplied by non-vertically integrated infrastructure operators, such as airports.
3. I disagree with that view.
4. As originally enacted, criterion (a) was framed to enquire whether access (or increased access) to the service would promote competition in a dependent market. As a result of amendments that commenced on 1 October 2006, criterion (a) was reframed to enquire whether access (or increased access) to the service would promote a material increase in competition in a dependent market. In both forms, the criterion was interpreted as asking whether access of any kind would promote competition in dependent markets in comparison to no access: see *Sydney Airport Corp v Australian Competition Tribunal* (2006) 155 FCR 124 and *Port of Newcastle Operations v Australian Competition Tribunal* (2017) 253 FCR 115. In my view, that criterion was readily, even trivially, satisfied in the case of natural monopoly infrastructure assets which were required to be used in order to compete in dependent markets.

¹ Now found in s 44CA of the CCA.

² Enacted by the *Competition and Consumer Amendment (Competition Policy Review) Act 2017* (Cth).

5. With effect from 6 November 2017, criterion (a) has been amended to enquire whether access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in a dependent market. The relevant comparison is forward looking and now compares the expected competitive environment in dependent markets with access on reasonable terms and conditions as a result of declaration with the expected competitive environment in dependent markets without such access. As stated in the relevant Explanatory Memorandum (at 12.20)³, the latter case may contemplate no access or some form of access without declaration.
6. Accordingly, under the new law, the decision maker is required to consider the relevant facts and circumstances that bear upon the expected nature and extent of access, and the expected competitive environment in dependent markets, with and without access through declaration. Essentially, there are two stages to the analysis: first, to consider whether and to what extent access would be expected to be granted in the absence of declaration, and how the terms and extent of access are likely to differ if the service were to be declared; and secondly, whether and to what extent those differences would be likely to affect competition in dependent markets.
7. In a market context involving a non-vertically integrated natural monopoly such as airports, the new criterion (a) is likely to be more difficult to establish. While the infrastructure owner will continue to have the ability and incentive to exercise market power (and extract monopoly rents from access seekers), the infrastructure owner may have less incentive to restrict access in a way that harms competition in dependent markets. The fact that, in the absence of declaration, the infrastructure owner is able to exercise market power and charge monopoly prices to all access seekers does not necessarily lead to a conclusion that competition in a dependent market will be restricted or lessened by that exercise of market power. It follows that it will be more difficult to satisfy the new criterion (a) in the case of non-vertically integrated natural monopolies, such as airports.

Yours sincerely

Michael O'Bryan QC

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³ Accompanying the *Competition and Consumer Amendment (Competition Policy Review) Act 2017* (Cth).

Impact of economic regulation on airport investment incentives

RESPONSE TO STAKEHOLDER SUBMISSIONS TO THE PRODUCTIVITY COMMISSIONS' INQUIRY INTO AIRPORT REGULATION

A common contention running through many of the airport submissions, to the Productivity Commission's (PC) Issues Paper is that continued investment in airports would be at risk if the current light-handed airport regulatory regime was replaced by more substantive economic regulation. We consider this argument to be simplistic and without evidential backing.

First, under current arrangements it cannot be presumed that airports are investing the right amount on the right things. Airports are monopolies that face many incentives to invest inefficiently.

Second, significant investment can, and is, delivered under effective regulatory regimes. Experience has shown that carefully designed regulatory regimes can and do provide appropriated incentives for investment whilst protecting against the misuse of market power. It is the specifics, rather than the existence of a regulatory regime, that affects investment.

Dismissing the case for regulation based on the possibility it might impact on investment is like throwing the baby out with the bathwater.

Unregulated monopolies will invest inefficiently

Under current arrangements it cannot be presumed that airports face incentives to invest efficiently. The literature in fact suggests to the extent an airport has market power it faces several incentives that reduce the efficiency of investment.

- It may have an **incentive to underinvest** as this would allow the service provider to increase profitability by justifying and charging scarcity rents. As noted above, this reduces consumer surplus and results in welfare loss for society¹.
- It may have an **incentive to undertake inefficient investment** by spending resources to obtain or protect a monopoly position ("rent seeking" behaviour).²
- It may **not chase productive efficiencies** that minimise its costs (or lead a 'quiet life'). A lack of competitive pressure may reduce the incentive for the firm to look for way to minimise costs by adopting cost-saving or innovative technologies.³

¹ There is a body of literature on the risk that monopolies will defer investment or under invest in capacity expansions. Dobbs (2004) found that firms with monopoly power who are able to control the scale of their investments will underinvest and will wait too long before adding to such investment. Consequently, prices to final customers are always higher than in competitive markets. Dobbs notes that under inelastic demand, the level of under investment can be substantial. In the airport sector, Zhang and Zhang (2003) showed that a profit-maximising airport is less inclined towards capacity expansions than a welfare maximising airport. (sources: Dobbs (2004), Intertemporal Price Cap Regulation under Uncertainty, *The Economic Journal* Vol. 114, No. 495 (2004) 421-440; and Zhang and Zhang (2003), Airport charges and capacity expansion: effects of concessions and privatization, *Journal of Urban Economics* 53 (2003) 54-75, at. 65.)

² See for example Joskow, Paul (2006) Regulation of natural monopolies, A. Mitchell Polinsky & Steven Shavell (eds), *Handbook of Law and Economics*

³ See discussion in PC, 2002, *Price Regulation of Airport Services*, Inquiry Report, p84

Regulatory regimes can deliver a high level of investment

High levels of investment can, and have, been achieved in sectors subject to effective regulatory regimes including for airports.

The AAA's submission notes that capital expenditure (per passenger) incurred at Australian airports is broadly consistent with peers⁴. In other words, Australian airports have been investing to a similar degree as other international airports on a per passenger basis. These international airports are under different, and often heavier handed regulatory arrangements and have equally been investing to keep up with growing demand. This implies the presence of a regulatory regime does not necessarily act as a barrier to investment. The level of investment that has taken place at Heathrow (see Box 1: and Changi, which are subject to price and revenue caps respectively, are good examples of this.

⁴ AAA Submission to the Productivity Commission, 2018 Inquiry into the Economic Regulation of Airports, p 61 (source: https://www.pc.gov.au/_data/assets/pdf_file/0019/231427/sub050-airports.pdf). Based on benchmarking undertaken by InterVISTAS which shows Sydney Airport's 5-year average of capital expenditure per passenger is mostly below its comparators, Adelaide and Perth (to a lesser extent) are largely in line with comparators and Brisbane and Melbourne are above.

Box 1: Heathrow Airport

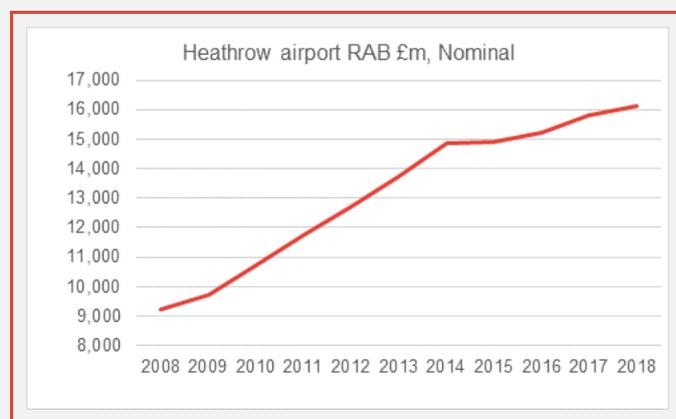
Heathrow Airport provides a helpful case-study of how a privately-owned airport can deliver significant investment under a form of price control.

Heathrow is subject to *ex ante* price caps set to recover an efficient level of future expenditure for the airport, based on the airport's proposal and submissions of users. This requires forecasts of future demand and expenditure which can be complex. The forecasts included in the regulatory determination are informed by "constructive engagement". Under this process airports and airlines directly negotiate with each other to determine traffic forecasts, service requirements, and investment programmes.

The AAA's submission notes that since 2002 Australian airports have invested over \$15 billion in infrastructure, of which around \$10 billion has been in aeronautical assets⁵. And suggests that this investment is a direct result of the current light-handed airport regulatory regime. While these figures appear sizeable, as highlighted in the AAA's own submission, for all but one Australian airport, capital expenditures per passenger are higher at Heathrow Airport, which is subject to more heavy-handed regulation.

Irrespective of whether Heathrow's regulatory regime is viewed as a success, it is clear that it has enabled significant investment to occur.

Furthermore, as demonstrate in the figure below Heathrow's Regulatory asset base has grown significantly by 174% from £9,233 in 2008 to £16,108 in 2018. This implies that investment at the airport has involved major augmentations and not just capital expenditure to maintain and replace the existing assets.

Heathrow Airport's RAB growth from 2008 to 2018

Source: RAB data published by Heathrow Airport⁶

Outside of airports, there are other examples of where significant investment has taken place in regulated industries. For example, the UK's National Audit Office suggested that the features of the

⁵ AAA Submission to the Productivity Commission, 2018 Inquiry into the Economic Regulation of Airports (source: https://www.pc.gov.au/data/assets/pdf_file/0019/231427/sub050-airports.pdf) Figure 4.11

⁶ AAA Submission to the Productivity Commission, 2018 Inquiry into the Economic Regulation of Airports (source: https://www.pc.gov.au/data/assets/pdf_file/0019/231427/sub050-airports.pdf); Heathrow Airport RAB data (Source: https://www.heathrow.com/file_source/Company/Static/PDF/Investorcentre/RAB-Sep-2018.pdf)

UK's water industry regulatory framework specifically contributed to a favourable climate for investing (see Box 2:).

Looking closer to home, large, lumpy investment has been enabled in Australia's regulated sectors such as energy, rail infrastructure, and ports.⁷ For example:

- Capital investment in the Hunter Valley and interstate networks operated by ARTC grew by an average of 23% per annum from 2007 to 2012 from what had historically been a stable level of investment.⁸
- The forecasted investment in the energy network reached historically high levels in the determinations in place in 2011. These forecasts represented real increase from the previous regulatory periods of around 82% in electricity transmission, 62% in electricity distribution and 74% in gas distribution.⁹ A significant portion of this growth was likely driven by the imposition of more stringent reliability and safety requirements.

Box 2: UK Water industry

In 1989 ten publicly owned water and sewerage authorities in England and Wales were privatised, largely because of concerns about chronic under-investment and high levels of inefficiency. In concert with the privatisation an independent regulator (Ofwat) was established to set prices for these privatised businesses.

Price were determined on the basis of companies' demand and cost forecasts for a coming 5 year period. Companies' business plans were assessed for efficiency by Ofwat who ultimately determined the prices. Companies were incentivised to make efficiency savings as they could keep the difference between agreed forecasts and their actual costs subject to meeting set service level requirements.

Under the resulting, stable regulatory regime, in the six years after privatisation, water companies invested £17 billion, in improving their networks. This was almost double the level of investment that took place in the six years before privatisation where £9.3 billion was invested.¹⁰

In total more than £116 billion has been invested over the last 25 years. The industry has invested, on average, half of its sales revenue in new assets and companies currently invest around £80 million a week in maintaining and improving assets and services¹¹.

After an initial period of major investment, the resulting efficiency gains have led to relatively stable prices, notwithstanding significant ongoing investment. Ofwat considers this is largely because companies have exploited cost efficiency gains by reducing operating costs or increasing the efficiency of their contracting models. These cost savings have not led to reduced service standards as compliance with key service indicators has improved since privatisation.

⁷ ACCC (2013) Productivity Commissions Review of the National Access Regime, ACCC Submission to the Issues Paper, February 2013

⁸ Ibid

⁹ AER 2011 cited in ACCC (2013) Productivity Commissions Review of the National Access Regime, ACCC Submission to the Issues Paper, February 2013

¹⁰ Water Services Association of Australia and IPA, (2015) *Doing the important, as well as the urgent: Reforming the urban water sector*, November 2015

¹¹ Ibid

Analysis of productivity growth in the sector has found that the UK's water and sewerage businesses materially outperformed those in comparators sectors of the economy in the decades after privatisation and leading up to the GFC in 2008¹².

Furthermore, a 2015 review of economic regulation in the water sector led by the UK's National Audit office found that the regulatory framework specifically contributed to a favourable climate for investing. Included in its findings were that:¹³

- The regulatory framework contributed to major improvements in water quality since privatisation by providing conditions that encouraged private investment and promoted environmental and quality improvements.
- Ofwat's 2014 price review successfully encouraged companies to reflect better customer priorities in pricing and service decisions. Ofwat required water companies to demonstrate how they had engaged with their customers in developing their business plans which led to much more detailed customer research and engagement.
- The regulatory framework has helped to establish a favourable climate for financing, benefiting both companies and consumers.

The effect of regulation on investment is a function of the specifics of the regime

Concerns around the impact of regulation on investment are nuanced. This is because the level and efficiency of investment undertaken by a regulated monopoly will depend very heavily on the specific nature of the regulatory framework it is subject to and how this is governed and implemented.¹⁴

The economic literature tends to focus on the consequences for investment that can arise from:

- **Regulatory discretion** — A regime that give a regulator significant discretion can create regulatory uncertainty which can increase the cost of financing and therefore investment costs.
- **The form of the control and other regime specific features** — For example, overinvestment or gold plating can arise under regimes where providers are able to recover a guaranteed return on any capital expenditure made.¹⁵ Conversely if the nature of the regime leads firms to expect prices will be set too low (such that they will not recover costs and make an appropriate return) this can

¹² Frontier Economics (2017) *Productivity improvements in the water and sewerage industry in England, since privatisation*, Final Report for Water UK, 29 September 2017

¹³ National, Audit Office (2015), *The economic regulation of the water sector*, 14 October, 2015

¹⁴ For support for the view that it is the details of the regulatory specification that matter in terms of the effect on risk see Alexander et al (1996), *Regulatory Structure and Risk and Infrastructure Firms e an International Comparison*. The World Bank (Policy Research Working Paper, December; Alexander et al (2000), *A few things transport regulators should know about risk and the cost of capital*. Util. Policy 9, 1e13; Gaggero, A.A., (2007), *Regulatory risk in the utilities industry: an empirical study of the English-speaking countries*. Util. Policy 15, 191e20; Grayburn, et al. (2002) *Report for the National Audit Office by NERA on Regulatory Risk*. Appendix 4. Published in National Audit Office, "Pipes and Wires", 10 April; Stern, J., (2013), *The Role of the Regulatory Asset Base as an Instrument of Regulatory Commitment*. CCRP Working Paper No. 22, March. Centre for Competition and Regulatory policy (CCRP).

¹⁵ This creates an incentive for the business to increase the value of the asset base to which the regulated rate of return is applied (by overinvesting or gold plating), and thereby increase the revenue that it may earn

lead to a lack of new investment. Regulation can also potentially introduce imitations on a firm's ability to respond to external shocks¹⁶.

- **Regulatory error from information asymmetry** — information constraints and limitations on the regulator's ability to foresee all potential eventualities, mean their decisions may distort infrastructure investment incentives. For example, under *ex ante* price regulation the regulator may be required to forecast demand and estimate an efficient level of future expenditure to determine a revenue requirement and price path that will enable recovery of this. This can be complex and result in setting a revenue requirement that is either too high or too low (vis-à-vis the outcomes that would arise in a competitive market) such that investment is either greater or less than the efficient level.

What can be concluded from the above is that the impact of regulation on investment is primarily driven by the specifics rather than the existence of a regulatory regime.

Furthermore, well designed regulation can reduce the risk of any unintended impacts on investment. The ACCC has noted that the ways in which regulation can affect investment are now well-known and well-understood. And consequently, regulators, have and are, adapting their regulatory approaches to remove and reduce these risks¹⁷

For example, information asymmetry may be less of a concern under a Final Offer Arbitration framework which encourages airports and their users to reach an agreement on new investment. This would reduce the potential for regulatory error as direct intervention would be limited to extreme cases where a party feels that it would be substantially better off by going to arbitration. In these cases, a robust arbitration framework, with clear objectives and obligations, will mitigate the risk that arbitrators make decisions that compromise efficient airport investment, and encourage confidence in the framework (i.e. reduce regulatory risk).

¹⁶ For example, under a price caps a regulated firm might be prevented from responding to sudden unexpected changes in the demand for services or uncontrollable cost increases which can increase its risk and therefore the cost of investment (see Box 3).

¹⁷ <https://www.pc.gov.au/inquiries/completed/access-regime/submissions/submissions-test/submission-counter/sub016-access-regime.pdf>

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Conservative estimate of net benefits of the reforms

RESPONSE TO HOUSTON KEMP'S CRITIQUE OF FRONTIER ECONOMICS' ECONOMIC EVALUATION REPORT

Assumptions used in the analysis

In an attachment to the AAA's supplementary submission to the PC's Issues Paper, Houston Kemp provided a critique of some of the assumptions underpinning Frontier's evaluation of A4ANZ's proposed regulatory remedy. Namely:

- the extent of cost pass-through;
- the presumed effectiveness of the proposed regulatory remedy;
- the description of transfers from airports to airlines/customers as 'benefits'; and
- the overlooking of the potential for additional costs because of the reform.

We acknowledged that there are uncertainties associated with these assumptions. Ideally this would be managed by subjecting the analysis to a full sensitivity analysis, however, this was not possible in the time allowed for submissions.

Instead, to manage this issue the analysis was separated into two components.

First, we explored whether the reforms would be **cost effective**— The uncertainty in this assessment was largely limited to the impact of the reforms on the likelihood parties might seek arbitration.

Second, we considered whether the reforms might be likely deliver **additional benefits**. There was greater uncertainty around the assumptions used in this analysis and so these estimates were provided to give some indication of the potential scale or significance of the benefits that have in the past been commonly overlooked.

In box 1 we provide more detail behind the rationale for the cost pass through assumption adopted in our analysis.

Box 1: The cost-pass through assumption

We agree with Houston Kemp that there is no economic theory that supports an a priori assumption about the extent of cost pass-through. We note in our economic evaluation report that the exact amount of pass through will depend on the nature of demand and the competitiveness of the air travel on any route.

Whilst assumptions about cost pass through are important when formally assessing pricing outcomes for the purpose of a market power assessment this is less critical when used as an input into the connectivity analysis.

By way of example, if we assume there is zero pass through of airport charges to airfares this would still impact on an airlines' costs on any route i.e. a rise in airport charges will increase the fixed costs of airlines, making routes less viable. Similarly, if we assume 100% pass through of

airport charges to airfares the rise in airport charges will reduce demand, thereby making the route less viable from an airlines perspective.

Given the primary purpose of this analysis was to explore the impact of airport charges on connectivity and route viability, any fall in airport charges (as a result of changes to the regulatory regime) could be viewed as beneficial to passengers, if it drives new connectivity. Irrespective of whether this comes through lower fares or through lowering the fixed costs of airlines. Therefore, to simplify the analysis we assumed 100% pass through.

This pass-through assumption will affect the passenger demand response. However, it is worth noting that we assumed a 1.9% increase in passenger demand in response to the anticipated fall in airport charges. This is only marginally above the increased traffic forecast by InterVISTAS, the AAA's advisor, who estimated there could be a 1.2% increase in total demand in response to a 10% decrease in airport charges¹.

Source: Frontier Economics

Conservative estimate of the benefit of the reforms

Many of the other uncertainties raised by Houston Kemp are already directly acknowledged in our report. However, on the whole they do not alter the conclusions of the analysis. For the purpose of demonstrating the significance of these matters we have completed a simplified, sensitivity analysis based on adopting conservative estimates for the key costs and benefits described in the report and discounting these to account for uncertainty.

For the purposes of this simplified assessment we have assumed the following:

- Implementation costs for the ACCC and industry are as described in the evaluation report.
- The reduced administration costs associated with more timely negotiations are as described in the evaluation report.
- A further \$23 million in administrative cost is incurred associated with a significant increase in arbitrations — While we do not consider that there is sufficient evidence to suggest that access to an FOA regime will encourage parties to seek arbitration as a “default. For the purposes of this simplified sensitivity analysis we have allowed for additional administrative costs for this. This figure would equate to over 23 FOA arbitrations in the next 15 years assuming each arbitration costs airlines, airports and the arbitrator, \$1 million in total.
- For this simplified sensitivity assessment, we have discounted all other direct benefits by 50%. Namely the dead weight loss and travel time savings estimates. This is to account for the uncertainty around the effectiveness of the regulatory remedy and the elasticity of demand.
- The wider benefits associated with increases in trade and FDI, driven by improvements in connectivity, have not been included.

The table below summarises the values of the revised costs and benefits under these conservative input assumptions and the outcomes that result. As demonstrated in the table below the regulatory reforms would still deliver \$445 million in net benefits with a benefit to cost ratio of 14:1.

¹ InterVISTAS, (2018), *The Impact of Airport Charges on Airfares*, prepared for the Australian Airports Association, p59 (source: https://www.pc.gov.au/_data/assets/pdf_file/0013/231430/sub050-airports-attachment3.pdf)

Table 1: Summary of costs and benefits

Costs and Benefits	NPV of Costs ²	
Cost to the ACCC of implementing minor amendments to its monitoring approach	\$2 million	As per report
Cost to airports from the introduction of an information transparency and disclosure regime	\$9 million	As per report
Increase in costs associated with arbitrations	\$23m	Additional cost item
Total Cost	34 million	
Improved timeliness of negotiation	34 million	As per report
Travel time saving (50%)	410 million	Benefit discounted by 50%
Deadweight loss (50%)	36 million	Benefit discounted by 50%
Total Benefit	479 million	
Net Benefit	445 million	
Benefit to Cost Ratio	14:1	

Source: Frontier Economics

² Assuming a 15 year evaluation period, and real discount rate of 7%.

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