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Review of Auckland International Airport's pricing decisions and expected performance (July 2017 – June 2022)

Final report – Summary and analysis under section 53B(2) of the Commerce Act 1986

Date: 1 November 2018

Executive Summary

X1 This report contains our analysis and conclusions on whether the pricing decisions and expected performance of Auckland International Airport Limited (Auckland Airport) are likely to promote the long-term benefit of consumers. It is intended to promote greater understanding of Auckland Airport's performance.

X2 We are publishing this report under section 53B(2)(b) of the Commerce Act 1986 (Act)[1] which, among other things, requires us to publish a summary and analysis of information disclosed by Auckland Airport about its price setting event.

X3 Auckland Airport is one of three international airports subject to information disclosure regulation under Part 4 of the Act.

X4 Auckland Airport has reset its prices for the period 1 July 2017 to 30 June 2022, after consulting with airlines. This is known as Auckland Airport's third price setting event (PSE3).

X5 This review focusses on Auckland Airport's expected profitability, investment efficiency and pricing efficiency for the PSE3 period. This helps promote greater understanding about the extent to which Auckland Airport has incentives to invest appropriately, improve efficiency, and provide services at a quality that reflects consumer demands, as well as being limited in its ability to extract excessive profits.[2]

X6 This review follows our first review of Auckland Airport's expected performance and pricing decisions for the 2013-17 pricing period (PSE2).[3]

Auckland Airport's extensive investment plans do not raise concerns

X7 We have considered Auckland Airport's prices and expected performance in the context of its extensive investment programme – $1.8b in aeronautical infrastructure over the PSE3 period and expected development of (and charging for) a second runway. This planned investment is driven by exceptional passenger growth, which has exceeded forecasts in recent years. Notably, passenger growth was over 11% in 2017.[4]

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1 References in this report to the "Commerce Act 1986", the "Act" and any provisions of the Act, are all references to the Commerce Act 1986 prior to the Commerce Amendment Act 2018 coming into force on 26 October 2018

2 These are some of the outcomes sought, under the Part 4 purpose (section 52A(1) of the Act), for suppliers of regulated goods or services. These outcomes are considered to promote the long-term benefit of consumers and to be consistent with outcomes produced in competitive markets.

3 This review also considered aspects of the airport's actual performance over the 2008-12 pricing period (PSE1) and was part of a wider review on the effectiveness of information disclosure regulation under section 56G of the Act and was reported to the Ministers of Commerce and Transport. We also provided section 56G reports in relation to the regulated airport services provided by Wellington and Christchurch International Airports. These section 56G reports can be found at: http://www.comcom.govt.nz/regulated-industries/airports/section-56g-reports/.

4 Auckland Airport "Specified Airport Services Annual Information Disclosure" 2013 to 2017.

X8 We consider Auckland Airport's planned investment projects are likely to accommodate future growth, help manage congestion, and improve the quality of services in the future.

X9 We note that Auckland Airport's investment consultation and engagement is generally viewed favourably by stakeholders, who have acknowledged the airport's willingness to work collaboratively to improve service quality and discuss offering individualised prices where airline preferences for service levels may differ.

X10 We accept that Auckland Airport's investment plans are likely to increase risk to Auckland Airport, particularly given its significant size. However, we are not persuaded that Auckland Airport will experience a material increase in undiversifiable risk, which affects its cost of capital, to the extent it suggests. For this reason, we are not satisfied that Auckland Airport has provided sufficient reasons and evidence to justify its target return over the PSE3 period.

A lower target return is likely to better reflect consumers' long-term interests

X11 Auckland Airport expects to earn 7.06% on its total regulatory asset base (RAB) over the PSE3 period. In our view, a target return below this is likely to better reflect consumers' long-term interests.

X12 Auckland Airport's expected return of 7.06% is a weighted average of its:

X12.1 Target return of 6.99% on the majority of its regulated services (about 92% of the RAB), which apply standard prices and are consulted on over the five-year PSE3 period. These are referred to as 'priced services' and include the use of airfield runways, taxiways, air-bridges and baggage handling services.

X12.2 Expected return of 7.9% on its remaining RAB (about 8%). These 'other regulated services' may include terminal lounges; and facilities and services for the operation of customs, immigration, quarantine checks, security and police services, refuelling of aircraft, and storage of freight. These services are priced under negotiated contracts that do not necessarily align with the five-year regulatory pricing period.

X13 We discuss our views on the expected return for priced services and other regulated services separately.

Auckland Airport has not sufficiently justified its target return of 6.99% on its priced services

X14 Having considered the reasons and evidence provided by Auckland Airport, we have not been persuaded that Auckland Airport's target return of 6.99% on its priced services promotes the long-term benefits of consumers, when compared to our mid-point post-tax weighted average cost of capital (WACC) estimate of 6.41%.

X15 As noted in the Input Methodologies Review (IM Review), a precise WACC for Auckland Airport is unobservable to both us and Auckland Airport itself.[5] However, we consider our mid-point WACC estimate of 6.41%, determined using the methodology set out in the IMs, to be the appropriate starting point when assessing returns for profitability analysis.

X16 Auckland Airport has suggested the higher target return is necessary because it has a higher cost of capital than our mid-point WACC estimate. It considers the higher target return is an important safeguard against the risks and costs of underinvestment in the airport sector.[6]

X17 We have carefully considered the evidence provided by Auckland Airport on the reasons for its higher target return, noting the inherent uncertainty in estimating an appropriate cost of capital. In this case, we have not been persuaded that Auckland Airport's higher target return is likely to result in benefits to consumers (eg, a lower risk of underinvestment) that outweigh the additional costs paid through higher charges.

X18 Auckland Airport's target return of 6.99% results in additional costs to consumers. Over the five-year PSE3 period, customers are expected to pay up to $53m more on priced services (compared to targeting our mid-point WACC estimate of 6.41%). This is equivalent to an average of 50 cents per person per flight. Auckland Airport is expected to earn an additional $37m in profit, after accounting for tax.[7]

An appropriate target return for Auckland Airport *may* be above our mid-point WACC estimate

X19 Despite this conclusion, we consider that not all of the additional $37m profit due to the airport's higher target return on its priced services necessarily represents excessive profits.

X20 Overall, we consider there is some evidence indicating an appropriate target return for Auckland Airport *may* be above our mid-point WACC estimate. However, there is inconclusive evidence to persuade us that any difference is likely to be of a sufficiently meaningful magnitude to support Auckland Airport's targeted return.

X21 In particular, the reasoning and evidence provided by Auckland Airport has not persuaded us that the magnitude of their departure from our mid-point WACC estimate is justified and likely to promote the long-term benefit of consumers.

X22 Under the information disclosure regime, the onus is on airports to provide sufficient reasoning as to why their targeted returns for PSE3 may be different to the

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5 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 64.

6 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), para 135.

7 We have estimated the total per passenger impact over the 5 year period using total passenger volumes (this includes domestic, international and transit and transfer passengers).

mid-point WACC estimate, which we publish in advance. Any reasoning needs to consider the long-term benefits of consumers. [8]

X23 This approach differs to how we undertook our previous review of Auckland Airport's prices for PSE2, where the upper limit of our WACC range (the 75th percentile) effectively represented the key benchmark when assessing airport profitability. Auckland Airport's expected returns have reduced from the 75th percentile of our WACC range in PSE2 to the 67th percentile in PSE3 for overall returns, and from the 83rd to the 65th percentile for returns on priced services.[9]

X24 Although not a focus of our review, this suggests that the extent to which the information disclosure regime limits Auckland Airport's ability to extract excessive profits has increased from PSE2 to PSE3.

Auckland Airport highlights increased exposure to systematic risk (ie, a higher asset beta)

X25 There is a 58 basis point difference between Auckland Airport's target return (6.99%) and our mid-point WACC estimate (6.41%). Of this, 56 basis points are due to the airport's use of a higher cost of equity owing to its expectation of increased exposure to systematic risk (ie, a higher asset beta), while 2 basis points are due to its assumed higher cost of debt.

X26 Auckland Airport did not provide a specific asset beta estimate, but we have assessed the implicit asset beta uplift associated with its target return to be 0.08 above our estimate of 0.60. It provided reasons for this, which we have considered.

We are not satisfied that an asset beta uplift of 0.08 is justified

X27 We acknowledge that estimating an appropriate cost of capital, and in particular an appropriate asset beta, is difficult. A number of submissions stated that all estimates are subject to a high degree of uncertainty.[10] We therefore have to use a significant degree of judgement when considering the reasoning and evidence provided by Auckland Airport to justify its application of an asset beta uplift.

X28 Taking into account this uncertainty, we have not been persuaded that the reasons and evidence provided by Auckland Airport are sufficient to justify an uplift to its asset beta of 0.08. In particular:

X28.1 The degree to which Auckland Airport's operating income increases with its revenue (ie operating leverage) may rise due to its significant capital expenditure programme. However, we consider the impact on asset beta is likely to be smaller than the 0.08 uplift.

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8 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraphs 59 and 97.

9 The 83rd percentile was for priced services in PSE2 was not published at the time but can be estimated from Auckland Airport's disclosed return of 8.5% on priced services and our April 2012 mid-point WACC estimate of 7.06%.

10 For example: Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 20.

X28.2 We do not consider the available evidence shows Auckland Airport's current or future operating leverage is likely to be significantly above that of other airports (in our asset beta comparator sample) over the PSE3 period.

X28.3 Auckland Airport has provided information on its observed asset beta which indicates its asset beta is higher than what it was estimated to be by our comparator sample, and that the asset beta is increasing. Nonetheless, we do not consider this information can, by itself, justify a departure from our mid-point WACC estimate. In our view, asset beta estimates for a single company and over a limited period of time are not sufficiently reliable. We also note the significant influence of unregulated revenues on Auckland Airport's asset beta, which further reduces the reliability of this estimate.[11]

X29 We consider that Auckland Airport's estimate of the cost of debt is, for the most part, reasonable. However, we have used our estimate of the cost of debt when assessing Auckland Airport's profitability because we consider the 20 basis point increase, between its draft and final pricing decision, has not been fully justified.

X30 Overall, we consider that the reasons and evidence Auckland Airport has provided indicate that an appropriate return may be above our mid-point WACC estimate. In light of this, we consider that not all of the additional $37m profit, associated with its higher target return of 6.99%, necessarily represents excessive profits.

X31 We note that Auckland Airport introduced new evidence to support its target return after the publication of our draft report.[12] Including this in its PSE3 disclosure would have provided greater transparency and allowed interested parties to better understand, and engage with, Auckland Airport's expected performance.

Reviewing returns on other regulated services over a longer timeframe

X32 We do not consider that Auckland Airport has sufficiently justified its expected return of 7.9% on its other regulated services.

X33 However, we consider that an airport's returns on other regulated services are likely to be better assessed over a longer timeframe. The individual contracts that apply to these services have varying durations and start dates that are not necessarily well aligned with our mid-point WACC estimate, which is consistent with the five-year PSE3 pricing period. In addition, there are a wide range of factors – such as market conditions, rent reviews and break clauses – that can affect the prices under the contracts that apply to these services.

X34 Other regulated services represent a small proportion of Auckland Airport's RAB, currently, only about 8%.

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11 It is noteworthy that the enterprise value of Auckland Airport has grown significantly compared to the regulated asset base (RAB). The value of the RAB is currently approximately 10-15% of the total enterprise value of Auckland and has been shrinking as a proportion for a number of years. An increasing proportion of value associated with non-aeronautical (unregulated) services is likely to increase the asset beta of the whole company without necessarily affecting the asset beta of regulated services.

12 See paragraphs A57 to A65.

X35 A review of the returns associated with other regulated assets across Auckland, Wellington, and Christchurch Airports could potentially be included in an ex-post review of airport performance, which we expect to undertake after Wellington Airport has completed its first five-year pricing period in 2019. A review could consider both:

X35.1 The actual return by airports over a longer period of time and how it compares to measures of the mid-point WACC estimate over time and the reasons for any differences

X35.2 The process for agreeing longer-term leases and rent reviews.

X36 Any review of services under bilaterally negotiated contracts would account for the context of a particular airport. For example, any review would be proportionate to the size of other regulated services and take into account concerns that have been raised by counterparties about customers' limited bargaining position when entering into these contracts.

Auckland Airport is expected to earn additional returns from its second runway assets

X37 Upon commissioning of the second runway, signalled for 2028, Auckland Airport will be able to include in its RAB, assets it is currently holding for the development of this runway. These assets will be capitalised using the airport's own target return.

X38 At the end of the PSE3 period, we estimate the value of these assets to be about $10m (or 3%) higher than they would be using our mid-point WACC estimate of 6.41%, or $8m higher in today's dollars (at the beginning of the PSE3 period). This $8m is separate to the additional $37m in post-tax revenue the airport is expected to earn above our mid-point WACC estimate on its priced services over PSE3.

Auckland Airport's runway land charge and its relationship to its second runway assets

X39 Auckland Airport intends to introduce a runway land charge (RLC) to recover the cost of holding land for the second runway.[13] Auckland Airport suggests its objective of introducing the RLC is to mitigate a price shock at the time of commissioning the second runway. We consider there to be alternative approaches available to Auckland Airport to achieve this goal.

X40 We note that this expectation of an $8m increase in asset value arises due to the airport targeting a return above our mid-point WACC estimate with the precise amount dependent on the level of the RLC.[14]

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13 Auckland Airport states that the RLC will be $1.19 + GST per passenger and introduced no earlier than July 2020, and only once it has met certain spending and construction thresholds associated with the second runway.

14 We have assumed the RLC is set at the level forecast by Auckland Airport when estimating the difference in asset values at the end of PSE3.

X41 The role of the RLC is to bring the additional revenue, associated with the holding costs of second runway assets, forward in time. The RLC itself, as proposed by Auckland Airport, does not raise concern about the airport earning excessive profits over PSE3.

X42 We agree with Auckland Airport's intention to offset any revenue from the RLC against the value of the land being held for the runway. In the event that the airport does not offset revenue in this way, or abandons the second runway project after introducing the RLC (a small risk, in our view), we have the ability to comment on the airport's behaviour in future.

The runway land charge is a flat rate charge and not structured to send price signals

X43 The RLC is proposed to be a flat rate charge.[15] It is not structured to send price signals to peak users in order to encourage more efficient use of the existing runway, and ultimately help ensure that the second runway is commissioned at the optimal time.

X44 Stakeholders have presented a range of views, arguing for and against the potential for airlines to meaningfully respond to price signals arising from differentiated charges based on time of day (peak pricing). Differentiated charges could be applied to the RLC or more widely across Auckland Airport's priced services.

X45 We consider it is possible that an off-peak charge, set below a peak charge, could minimise the adverse impact on demand of the proposed RLC. This could be a more efficient way of recovering Auckland Airport's fixed costs than applying a flat rate charge.

X46 Auckland Airport notes that on balance, it considered differential peak charges would be very complex to implement for PSE3. However, it has not ruled out peak charging in future and has committed to carefully reflecting on the use of peak pricing differentials for future pricing periods.[16] We encourage the ongoing consideration by Auckland Airport of differential peak charging where it can result in efficiency benefits that outweigh implementation costs.

Auckland Airport has sought improvements to the efficiency of its prices

X47 Overall, we consider that Auckland Airport has continued to seek improvements to the efficiency of its prices. We note several positive steps, including the introduction of specific differential charges, which reduce the likelihood of cross-subsidisation between customer groups and allow airlines to make price-quality trade-offs. The introduction of parking charges for planes seeks to improve airfield efficiency.

X48 We note Auckland Airport's commitment to consider the benefits of peak pricing in future pricing periods and, in the interim, test the elasticity of demand for peak and off-peak services through its route development initiatives. These include the

[15] This flat-rate charge is per passenger per flight.

[16] Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 24.

promotion of new international routes and airlines to increase passenger and aircraft volumes at off-peak times.[17] We expect the airport to provide transparency in this area and consult on any resulting price and demand impacts, as part of its consultation with airlines in future pricing periods.

X49 Auckland Airport also appears to have continued to set prices transparently in PSE3, and has had regard to price stability and certainty for stakeholders.

Auckland Airport is investing in infrastructure in response to strong growth

X50 Auckland Airport is responding to the strong passenger growth it has experienced in recent years with greater operating expenditure and large capital investment.

X51 Passenger numbers have exceeded forecasts, including exceptional passenger growth in 2016 and 2017 of 8.6% and 11.3% respectively.[18] Passenger numbers are forecast to increase year-on-year over the PSE3 period, creating further pressure on expenditure and infrastructure.

X52 Broadly speaking, it appears that this growth is enabling economies of scale in some areas of expenditure (reducing per passenger costs), while placing pressure on other areas. This includes costs driven by construction in a live operating environment. Nonetheless, we consider that Auckland Airport's forecast operating expenditure per passenger does not appear unreasonable, including when compared to historic levels.

X53 Planned and actual investment is generally occurring at an appropriate time, with delays and reprioritisations justified on the basis that they were consulted on and received broad agreement by most airlines.

X54 We expect the airport's governance and consultation framework to provide airlines with reasonable opportunity to monitor Auckland Airport's performance in carrying out its investment plans and to assess any proposed changes to these plans.

X55 We have the ability in future to comment on Auckland Airport's historical performance, including any concerns we have that differences between forecast and actual investment indicate planned under-investment or over-investment, or intentional delaying of projects.

X56 Both Auckland Airport and airlines agree that Auckland Airport may experience some ongoing quality concerns over PSE3. It is not unreasonable to expect changes in quality of service during construction, and while new projects are beginning. We do not find evidence of any systematic degradation of quality that remains unaddressed.

X57 Overall, we consider it likely that Auckland Airport's investment programme will address a number of quality concerns over the longer term.

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17 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A, page 2.

18 Auckland Airport "Specified Airport Services Annual Information Disclosure" 2013 to 2017.

X58 We consider there are no significant concerns regarding the forecast cost and timing of the airport's capital expenditure. Auckland Airport had its Terminal Development Plan (its single largest capital project in PSE3) independently costed and then independently peer reviewed. This provides reassurance that Auckland Airport has applied a high level of rigour in the costing of its forecast capital expenditure plans.

X59 Furthermore, our review of Auckland Airport's historic capital expenditure compared to forecast does not provide evidence of planned under-investment, or over-investment.

Chapter 1 Introduction

Purpose of this report

1. This report contains our analysis and conclusions about Auckland International Airport Limited's (Auckland Airport) pricing decisions and expected performance for the period 1 July 2017 to 31 June 2022.

2. Auckland Airport is one of three international airports subject to information disclosure regulation under Part 4 of the Commerce Act 1986 (Act)[19].

3. We are publishing this report under section 53B(2)(b) of the Act, which requires us to publish a summary and analysis of information disclosed by Auckland Airport, including information about its price setting event.[20]

4. The conclusions and analysis in this report take into account the submissions we received on this review, in response to our *Process and Issues paper* published on 20 October 2017, and our *Draft report on the Review of Auckland International Airport's pricing decisions and expected performance (July 2017-June 2022)* (draft report) published on 26 April 2018.[21]

Structure of this chapter

5. This chapter discusses:

   5.1 the context for this report;

   5.2 the focus of our review, including consideration of stakeholder views;

   5.3 our approach to assessing expected performance in this review;

   5.4 the information we have used to assess expected performance; and

   5.5 the structure of the document.

Context for this report

Auckland Airport has reset its prices

6. In June 2017, Auckland Airport reset its prices for the period 1 July 2017 to 30 June 2022 after consulting with airlines. Auckland Airport refers to this as its third price setting event (PSE3).

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19 References in this report to the "Commerce Act 1986", the "Act" and any provisions of the Act, are all references to the Commerce Act 1986 prior to the Commerce Amendment Act 2018 coming into force on 26 October 2018

20 Auckland Airport is required to publicly disclose information about its price setting event in accordance with the Airport Services Information Disclosure Determination 2010, as amended, most recently on 21 December 2017.

21 Our draft report, the *Process and Issues paper*, and submissions received on these documents can be found at: http://www.comcom.govt.nz/regulated-industries/airports/airports-information-disclosure-summary-and-analysis/price-setting-event-3-pse3-for-auckland-and-christchurch/.

7. Auckland Airport provided its first pricing disclosure under information disclosure regulation in 2011. [22] It had been consulting with airlines on proposed price changes before this under the Airport Authorities Act 1966 (AAA) and continues to do so.

8. Under the AAA, airports can set prices as they see fit, but must consult with airlines prior to fixing or altering charges and within at least five years after fixing or altering charges.[23] This means that airports reset prices at least every five years.

9. In this document, we refer to Auckland Airport's first and second price setting events as 'PSE1' and 'PSE2' (PSE1 relates to the pricing period 1 July 2007 to 30 June 2012 and PSE2 relates to the pricing period 1 July 2012 to 30 June 2017).

Auckland Airport has publicly disclosed information about its pricing decisions

10. In August 2017, Auckland Airport publicly disclosed information about its pricing decisions over the PSE3 period.

11. After a price setting event, the three airports subject to information disclosure regulation - Auckland, Wellington and Christchurch International Airports[24] - must publicly disclose information relating to their forecast total revenue requirement for their regulated services.[25]

12. Although not the subject of this report, each regulated airport must also annually publish historical information relating to its financial position in relation to "specified airport services" and the quality of those services.[26]

13. Table 1.1 below outlines the regulated services which are the subject of Auckland Airport's PSE3 disclosure and this report.[27] These regulated services can be grouped into two categories.

    13.1 'Priced services' are those regulated services for which prices are set for the five-year pricing period, after consultation with "substantial customers".[28]

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22 Auckland Airport has been subject to information disclosure regulation under Part 4 of the Act since 2008. Transitional disclosures were made under both Part 4 of the Act and the Airport Authorities Act 1966 until we issued our first set of disclosure requirements, which Auckland Airport disclosed against in 2011.

23 Specifically, section 4B of the AAA requires airports to consult with "substantial customers", the meaning of which is set out in section 2A of the AAA.

24 See section 56A of the Act.

25 Under section 53B(1)(a) of the Commerce Act, every supplier of goods or services subject to information disclosure regulation must publicly disclose information in accordance with the information disclosure requirements set out in the relevant section 52P determination. The relevant determination for airports is the Airport Services Information Disclosure Determination 2010, as amended, most recently on 21 December 2017.

26 *Airport Services Information Disclosure Determination 2010* NZCC 29, clause 2.3 and 2.4.

27 These regulated services are defined in section 56(1) of the Act and in more detail in section 2 of the AAA.

28 See section 2A of the AAA.

Priced services represent the majority of Auckland Airport's RAB (about 91.5% in 2017).[29]

13.2 'Other regulated services' – representing about 8.5% of Auckland Airport's RAB – are those regulated services priced through contractual arrangements with individual customers. These contracts have a variety of lengths and start dates, which are not necessarily aligned with the five-year regulatory pricing period.[30]

Table 1.1 Regulated and non-regulated airport services

Priced services typically include	*Other regulated services typically include*
• airfield landing facilities and services, such as the provision and maintenance of airfields, runways and taxiways. • airfield parking facilities and services. • specified passenger terminal activities such as passenger seating areas, thoroughfares, and air-bridges.	• aircraft and freight activities – facilities and services that help maintain aircraft and the handling of freight transport by aircrafts. This could include facilities and services for the refuelling of aircraft, waste disposal, and the storing of freight. • other specified passenger terminal activities, which may include facilities and services for the operation of customs, immigration, quarantine checks, security and police services, terminal lounges, and collection facilities for duty free.

14. Auckland Airport also offers services which are not regulated under Part 4 of the Act and are outside the scope of this report. Examples of these services may include: the space for retail outlets in the terminals (duty free stores, speciality stores, news and book stores, and food and beverage outlets), access for taxis and public transport, car parks and car rental tenancies and property leases.

We must publish a summary and analysis of Auckland Airport's disclosed information

15. We are publishing this report under section 53B(2)(b) of the Act, which requires us to publish summary and analysis of the publicly disclosed information as soon as practicable. This is for the purpose of promoting greater understanding of Auckland Airport's performance, its relative performance, and the changes in performance over time.

16. To promote greater understanding of Auckland Airport's performance, this report contains our analysis and conclusions on Auckland Airport's pricing decisions and expected performance over the PSE3 period. Where appropriate, we compare this

[29] 'Priced services' form the 'pricing asset base' in the *Airport Services Information Disclosure Determination 2010*.

[30] Under section 4B of the AAA, the airport is required to consult substantial customers in respect of charges on all regulated services within five years. This requirement encompasses 'other regulated services' priced under individual contractual arrangements. Nonetheless, the airport is not required to consult with a substantial customer who has consented in writing (and not withdrawn that consent) to not being consulted about a specific charge.

forecast performance to Auckland Airport's past performance, and compare Auckland Airport's past performance to that of other airports.

Previous review of Auckland Airport's performance and pricing decisions

17. In 2013, we reviewed Auckland Airport's performance and pricing decisions for the 2013-17 pricing period (PSE2) and aspects of its actual performance over the 2008-12 pricing period (PSE1).[31] This was part of a wider review on the effectiveness of information disclosure regulation under section 56G of the Act.[32]

Focus of our review

18. We have focussed our review of Auckland Airport's pricing decisions and expected performance for the PSE3 period on the following aspects of Auckland Airport's performance.

    18.1 Expected profitability: is Auckland Airport limited in its ability to extract excessive profits?

    18.2 Investment efficiency: is Auckland Airport investing in assets appropriately, efficiently and at a quality that reflects consumer demands?

    18.3 Pricing efficiency: are the prices set by Auckland Airport likely to promote efficiency?

19. We have assessed whether these aspects of Auckland Airport's performance are likely to promote outcomes that are in the long-term benefit of consumers and are consistent with the outcomes sought in the purpose of Part 4 of the Act. This is because under section 53A of the Act, the purpose of information disclosure regulation is to ensure that sufficient information is readily available to interested persons to assess whether the purpose of Part 4 of the Act is being met.

20. The purpose of Part 4 as set out in section 52A(1) of the Act is to:

> *promote the long-term benefit of consumers in [regulated markets] by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services:*
>
> *(a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and*

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31 A forward-looking review of Auckland Airport's pricing decisions over PSE1 was not carried out because information disclosure regulation came into effect in 2011 part way through PSE1 which commenced on 1 July 2007.

32 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013). This one-off review was reported to the Ministers of Commerce and Transport. We also provided section 56G reports in relation to the regulated airport services provided by Wellington and Christchurch Airports. These section 56G reports can be found at: http://www.comcom.govt.nz/regulated-industries/airports/section-56g-reports/.

> *(b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and*
>
> *(c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and*
>
> *(d) are limited in their ability to extract excessive profits.*

21. Our focus on expected profitability, investment efficiency, and pricing efficiency does not necessarily cover all outcomes reflected in the Part 4 purpose statement. We have not explicitly considered Auckland Airport's incentives to innovate (section 52A(1)(a)) or its sharing of efficiency gains (section 52A(1)(c)), and have only undertaken limited analysis on efficiency improvements and service quality (section 52A(1)(b)).

22. This focus reflects the nature of the information provided in the PSE3 disclosure, which is the subject of this review. As price setting event (PSE) disclosures contain forward-looking information, they provide the most detail about expected profitability, prices and forecast operating and capital expenditure. PSE disclosures do not provide much information about the appropriateness of airports' level of innovation and quality of services, or whether the operational expenditure and investment is efficient. The historical information disclosed annually by airports provides better insight into these areas of performance, but are not the subject of this review.

Stakeholders' views on the focus of this review

23. In response to our *Process and Issues paper* and draft report, stakeholders commented on the scope of our review of Auckland Airport's pricing decisions and expected performance over the PSE3 period.

24. A number of submitters welcomed a review of airports' historical performance in the future, where innovation, service quality, and efficiency can be assessed.[33] Wellington Airport expressed concern that New Zealanders are not being provided with a full contextual assessment of airport performance in New Zealand, noting that this includes ensuring airport performance is assessed against all limbs of Part 4, without an undue focus on profitability.[34] Air New Zealand also commented that

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33 A4ANZ "Submission on draft report for review of Auckland International Airports pricing decisions and expected performance (July 2017 – June 2022)" (29 May 2018), page 3. Air New Zealand "Submission on draft report for review of Auckland International Airports pricing decisions and expected performance (July 2017 – June 2022)" (29 May 2018), page 3. BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 6. Qantas "Qanats Group's Response to Draft Report on Auckland Airport's PSE3 Pricing Decision" (29 May 2018), page 2. NZ Airports Association "Submission on draft report for review of Auckland International Airports pricing decisions and expected performance (July 2017 – June 2022)" (29 May 2018), page 5.

34 Wellington Airport "Response to draft report on Auckland International Airport's PSE3 pricing" (29 May 2018), page 1.

"[ID] is not a strong enough regulator of airport services to drive best outcomes for consumers in areas such as service quality and efficiency".[35]

25. The New Zealand Airports Association (NZ Airports) considered that our focus for this review "appropriately reflects the nature and content of the price setting disclosures"[36] while noting that assessing each limb of the Part 4 purpose statement is an ongoing task, and cannot reasonably be completed by a snapshot assessment of each price setting event.[37] This view was supported by both Auckland Airport and Christchurch Airport.[38]

26. The Board of Airline Representatives New Zealand Incorporated (BARNZ) argued that innovation, quality and efficiency are areas of performance that most directly affect consumers.[39] BARNZ considered that to provide a full view of airport performance over time, it is essential to review expenditure efficiency, quality of service and innovation as well as the areas of focus in this report.[40]

27. We note that prior to the release of our draft report, Air New Zealand, BARNZ and Qantas argued that this review should cover airports' annual ex-post information disclosures.[41] Air New Zealand remarked that it is not clear whether such a review will occur and BARNZ noted that such a review is "well overdue".[42]

Comment on our focus

28. The performance indicators of innovation, service quality, and efficiency are not the focus of this review, and are better assessed as part of a review of ex-post annual disclosures.

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35 Air New Zealand "Submission on draft report for review of Auckland International Airports pricing decisions and expected performance (July 2017 – June 2022)" (29 May 2018), page 4.

36 NZ Airports Association "Cross submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (12 December 2017), paragraph 10a.

37 NZ Airports Association "Cross submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (12 December 2017), paragraph 11. NZ Airports Association "Submission on draft report for review of Auckland International Airports pricing decisions and expected performance (July 2017 – June 2022)" (29 May 2018), paragraph 17.

38 Auckland Airport "Section 53B review of Auckland Airport's price setting event: Cross-submission on process issues" (12 December 2017), page 1. Christchurch Airport "CIAL Cross submission on process, timing and changes to proposed section 53B process" (12 December 2017), page 1.

39 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), paragraph 19.

40 BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 6.

41 See Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), paragraph 5; BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), paragraph 26; and Qantas "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), page 2.

42 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), paragraph 6. BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), paragraph 4.

29. Nonetheless, these performance indicators are considered in our analysis to the extent that Auckland Airport's PSE3 disclosure provided relevant insight into these aspects of performance in the context of analysing expected profitability, investment efficiency, or pricing efficiency. For example, we have considered whether Auckland Airport's planned investment is likely to address past or current quality issues and likely to provide services at the quality which consumers want in the future. We have also taken account of relevant historical information in Auckland Airport's annual disclosures when comparing the airport's performance over time, such as its operating and capital expenditure and demand growth.

30. We consider it preferable to commence an ex-post analysis of airports' performance against a complete five-year pricing period for all three regulated airports (Auckland, Wellington and Christchurch). This provides more historic information to meaningfully understand relative performance, assess trends, and the changes in performance over time.

31. We have complete information relating to Auckland and Christchurch Airports' historical performance for the five-year pricing period over 2013-17 (PSE2) and expect to have this information on Wellington Airport in mid-2019, once it completes its first five-year pricing period (since information disclosure regulation came into effect).[43] We consider it best to commence an ex-post analysis of airports' performance after this has occurred, rather than prior.[44]

32. We do not agree with Air New Zealand, who noted that our focus on particular aspects of performance for this review sets a precedent for subsequent reviews.[45] The scope of future reviews will be based on the relevant circumstances and relevant information disclosed at the time.

33. Furthermore, the Act does not require us to undertake analysis on all aspects of performance in relation to a particular information disclosure. As indicated, our summary and analysis, under section 53B(2)(b) of the Act, is undertaken to promote greater understanding about the performance of each airport, their relative performance, and changes in performance over time. We consider that our focus on expected profitability, investment efficiency, and pricing efficiency for this review contributes to this purpose.

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[43] We do not have complete information relating to airports' historical performance over the PSE1 period (FY2008-FY2012), which commenced prior to the introduction of information disclosure regulation in 2011. In addition, Wellington Airport brought forward its third price setting event. As a result Wellington Airport has not completed a full five year pricing period since information disclosure regulation began.

[44] Prior to undertaking this ex-post analysis, we also intend to amend backward looking information disclosure requirements so that historical information can be more effectively compared to forecasts. This is to align with the recent amendments to the forward looking information that airports must disclose.

[45] Our view was shared by the NZ Airports Association. See NZ Airports Association "Cross submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (12 December 2017), paragraph 17.

Approach to assessing expected performance in this review

34. We have assessed whether Auckland Airport's expected profitability, investment efficiency, and pricing efficiency is consistent with outcomes that are in the long-term benefit of consumers, as reflected in the purpose of Part 4 of the Act.

35. We outline the broad approach to this assessment below. There are differences in the specific approaches taken to assessing each performance area. We outline these specific approaches in the relevant sections throughout this report.

Input methodologies provide a benchmark for assessing expected performance

36. Our Input Methodologies (IMs) for regulated airport services provide a benchmark for assessing whether the Part 4 purpose is being promoted, notably in regards to profitability.

37. IMs represent our best assessment of how certain parameters – cost allocation, asset valuation, the treatment of taxation, and the cost of capital – should be specified to promote the setting of revenue targets that are consistent with the Part 4 purpose.

38. IMs are intended to promote certainty about the rules and processes applying to information disclosure regulation. Airports are not required to apply the IMs in setting their prices or in determining their cost of capital.[46] With the exception of our estimated cost of capital, airports must disclose information consistent with the IMs. Nonetheless, the IM for the cost of capital is applied by us in order to monitor and analyse information disclosed by the airports.[47] The onus is on airports to provide sufficient reasoning as to why their targeted returns may be above the mid-point WACC estimate, which we publish in advance. Any reasoning needs to consider the long-term benefits of consumers.[48] We discuss our framework for applying this in more detail in **Attachment A**.

We consider reasons for departure from our input methodologies

39. Our IMs provide an appropriate benchmark for assessing expected performance. However, they do not necessarily provide the only legitimate benchmark for assessing expected performance against the purpose of Part 4 of the Act.

40. If the airport's forecasts are not fully aligned with our IMs, we do not assume the Part 4 purpose is not being promoted. We consider the extent to which the airport has departed from our IMs, reasons for such departures, and the impact this has on expected performance. We then determine whether we are satisfied that the evidence provides legitimate reasons for the departure from our IMs, in light of the Part 4 purpose. Ultimately, we consider whether a departure from our IMs is promoting the long-term benefit of consumers.

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46 Section 53F(1)(b) of the Act.

47 Section 53F(1)(b) of the Act.

48 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraphs 59 and 97.

41. In this review, we consider the appropriateness of Auckland Airport targeting returns above our mid-point WACC estimate. We consider our mid-point WACC estimate, set using the methodology set out in the IMs, to be the appropriate starting point when assessing returns for profitability analysis.

We consider what we might expect to find in a workably competitive market where input methodologies are not available

42. Our analysis considers whether the airport's conduct and decisions are consistent with those in a workably competitive market (for example, decisions regarding the sharing and managing of risk).

43. This is most relevant to our analysis of Auckland Airport's investment efficiency and pricing efficiency, where IMs are less prescriptive than they are in relation to our analysis of the airport's profitability.

44. To assess this, we have been largely reliant our assessment of Auckland Airport's disclosed information and the submissions received from interested parties about the airport's conduct throughout its consultation process. This includes the level of agreement among stakeholders regarding the outcomes of that process.

We take into account relevant context, analysis and decisions we have made

45. Our approach to assessing Auckland Airport's pricing decisions and expected performance is consistent with the framework we have applied in our report reviewing Christchurch Airport's pricing decisions and expected performance over PSE3.[49]

46. We have sought consistency with the framework we applied in our review of Auckland Airport's PSE2 disclosure, except where there is a good reason for departure (for example, to reflect changes to our IMs following our 2016 review).

47. We have also considered how the airport's forecast performance over the PSE3 period compares to its historical performance, and reasons for over- and under-performance in the past.

We previously reviewed Auckland Airport's PSE2 disclosure

48. Our review of Auckland Airport's PSE2 was undertaken as part of a wider review on the effectiveness of information disclosure regulation.[50] This one-off review was required under section 56G of the Act and differs to this report, which is carried out under section 53B of the Act and seeks to provide a better understanding about particular areas of Auckland Airport's expected performance.

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49 Commerce Commission "Review of Christchurch International Airport's pricing decisions and expected performance (July 2017 – June 2022)" (1 November 2018).

50 This one-off review was reported to the Ministers of Commerce and Transport. We provided section 56G reports in relation to the regulated airport services provided by Wellington and Christchurch Airports as well. These section 56G reports can be found at: http://www.comcom.govt.nz/regulated-industries/airports/section-56g-reports/.

49. Our section 56G report on Auckland Airport concluded that information disclosure was limiting excessive profits, promoting innovation, and encouraging an appropriate quality of service. We were unable to conclude whether information disclosure was working effectively in other areas (ie, operational expenditure efficiency, efficient investment and the sharing of benefits from efficiency gains) as there was an insufficient time series of data available.[51]

Information we have used to assess expected performance in this review

50. We have prepared this report after considering all submissions and cross submissions received to date on our *Process and Issues paper* and our draft report.

51. We have relied on the following information as part of our review:

    51.1 information disclosed by Auckland Airport under Part 4 of the Act, including its PSE3 disclosure and historical information to the extent relevant;[52]

    51.2 material provided by stakeholders as part of the consultation process for this review;

    51.3 information we requested from Auckland Airport to clarify aspects of its PSE3 disclosure and submissions on our consultation process, following the close of consultation; and[53]

    51.4 information made available by Auckland Airport that is not required to be disclosed under Part 4 of the Act (for example, we relied on Auckland Airport's pricing model to assess its profitability).

We have not limited our consideration of information in this review but have had regard to the information available at the time of the price setting event

52. In response to our *Process and Issues paper*, Auckland Airport and the NZ Airports asked that this review focus on the information available at the time of the price setting event.

    52.1 Auckland Airport submitted that the review should focus on the conduct of the airports at the time prices were set, based on the information available to the airports at that time.[54]

    52.2 Similarly, the NZ Airports stated that the review should not provide a forum for consulting participants to raise new concerns or put forward new

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51 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013), paragraphs X3 – X6.

52 See https://corporate.aucklandairport.co.nz/investors/regulation.

53 See documents under "Draft report – Auckland Airport" at http://www.comcom.govt.nz/regulated-industries/airports/airports-information-disclosure-summary-and-analysis/price-setting-event-3-pse3-for-auckland-and-christchurch/.

54 Auckland Airport "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), page 5.

evidence or arguments that were not put to the airports during the consultation process.[55]

53. BARNZ submitted that the Commission should consider all relevant information provided to it as part of the review consultation process. BARNZ considered that limiting our review to information available at the time prices were set would reduce our ability to review the decisions and create substantial procedural and practical difficulties.[56]

54. We agree with BARNZ that we can consider all relevant information provided to us as part of the review consultation process. We have flexibility in how we carry out our analysis, provided we are doing so for the purpose of promoting greater understanding of Auckland Airport's performance, as per section 53B(2)(b) of the Act. We have not limited our review to consider only information that was available at the time that prices were set.

55. Nevertheless, when assessing the reasonableness of decisions made by Auckland Airport during their price setting event, we have given consideration to the information that was available to them at that time. NZ Airports responded that it is comfortable with this approach.[57]

Structure of this document

56. **Chapter 2** contains our analysis and conclusions on the appropriateness of Auckland Airport targeting returns above our mid-point WACC estimate. Our key consideration is the extent to which these target returns are likely to promote the long-term benefit of consumers. **Chapter 3** contains our analysis and conclusions on the extent to which Auckland Airport is investing in assets appropriately, efficiently and at a quality that reflects consumer preferences. This includes consideration of the reasonableness of Auckland Airport's consultation process, the extent to which the airport's investment plan is likely to address current or future quality concerns, and whether Auckland Airport has appropriately costed its investment plans and mitigated associated risks. This influences our analysis on Auckland Airport's expected profitability (**Chapter 2**).

57. **Chapter 4** contains our analysis and conclusions on the extent to which Auckland Airport's pricing methodology is likely to result in prices which raise efficiency concerns. This includes consideration of the airport's proposed runway landing charge.

58. We have also included attachments to support our analysis.

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55 NZ Airports Association "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), paragraph 5.

56 BARNZ "Cross-submission on the Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper – process, timing and scope" (12 December 2017), paragraph 17.

57 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 21.

58.1 **Attachment A** contains our assessment of Auckland Airport's cost of capital. This is a key input to our analysis and conclusion in **Chapter 2.**

58.2 **Attachment B** contains our assessment of forecasts affecting Auckland Airport's returns, including its asset values, forecast demand, forecast operating expenditure, and the RLC. This supports our analysis and conclusions in **Chapter 2.** This attachment also considers the extent to which Auckland Airport is improving its operating efficiency and providing services at a quality that reflects consumer demands.

58.3 **Attachment C** describes the methodology for our assessment of Auckland Airport's expected profitability, discussed in **Chapter 2.**

58.4 **Attachment D** discusses how effective recent amendments to the IM and ID Determinations have been in improving the transparency of Auckland Airport's expected profitability.

Chapter 2 Expected profitability: is Auckland Airport limited in its ability to extract excessive profits?

Purpose

59. This chapter contains our analysis and conclusions on the appropriateness of Auckland Airport targeting returns above our mid-point post-tax WACC estimate. Our key consideration is the extent to which these target returns are likely to promote the long-term benefit of consumers.

60. This analysis is relevant to the extent to which Auckland Airport is limited in its ability to extract excessive profits (section 52A(1)(d) of the Act).

61. Our analysis and conclusions on forecasts underpinning Auckland Airport's expected returns and profitability are discussed in **Chapter 3** (capital expenditure forecasts), **Attachment A** (cost of capital) and **Attachment B** (asset values, demand forecasts, operating expenditure forecasts, and its RLC).

Conclusions

A lower target return is likely to better reflect consumers' long-term interests

62. Auckland Airport expects to earn 7.06% on its total RAB over the PSE3 period. In our view, a target return below this expectation is likely to better reflect consumers' long-term interests.

63. Auckland Airport's expected return of 7.06% is a weighted average of its:

    63.1 target return of 6.99% on most of its regulated services (about 92% of the RAB). These are referred to as 'priced services' and include the use of airfield runways and taxiways, air-bridges and baggage handling services. Priced services apply standard prices, and are consulted on, over the five-year PSE3 period.

    63.2 expected return of 7.9% on its remaining 8% of the RAB. These 'other regulated services' may include terminal lounges, and facilities and services for the operation of customs, immigration, quarantine checks, security and police services, refuelling of aircraft, and storage of freight.

Auckland Airport has not sufficiently justified its target return of 6.99% on its priced services

64. Having considered the reasons and evidence provided by Auckland Airport, we are not persuaded that Auckland Airport's target return of 6.99% on its priced services better promotes the long-term benefit of consumers, when compared to our mid-point WACC estimate of 6.41%.

65. As noted in the IM Review, a precise WACC for Auckland Airport is unobservable to both us and Auckland Airport itself.[58] However, we consider our mid-point WACC estimate of 6.41%, determined using the methodology set out in the IMs, to be the appropriate starting point when assessing returns for profitability analysis.

66. Auckland Airport has suggested the higher target return is necessary because it has a higher cost of capital than our mid-point WACC estimate. It considers its higher target return is an important safeguard against the risks and costs of underinvestment in the airport sector.[59]

67. We have carefully considered the evidence provided by Auckland Airport on the reasons for its higher target return, noting the inherent uncertainty in estimating an appropriate cost of capital. In this situation we have not been persuaded that Auckland Airport's higher target return is likely to reflect a better estimate of the WACC or that there are other benefits to consumers (eg, a lower risk of underinvestment) that outweigh the additional costs paid through higher charges.

68. Auckland Airport's target return of 6.99% results in additional costs to consumers. Over the five-year PSE3 period, customers are expected to pay up to $53m more on priced services (compared to targeting our mid-point WACC estimate of 6.41%). This is equivalent to an average of 50 cents per flight. Auckland Airport is expected to earn an additional $37m in profit, after accounting for tax.[60]

69. In particular, we have not been persuaded that the reasons and evidence provided by Auckland Airport are sufficient to justify the airport's use of a higher cost of equity, owing to its expectation of a higher exposure to systematic risk (ie, a higher asset beta, equivalent to an uplift of 0.08). This higher cost of equity accounts for 56 of the 58 basis point difference between Auckland Airport's target return of 6.99% and our mid-point WACC estimate of 6.41%. The other two basis points are due to the airport's assumed higher cost of debt.

70. Auckland Airport's estimate of the cost of debt is, for the most part, reasonable. However, we have used our estimate of the cost of debt when assessing Auckland Airport's profitability because we consider the 20 basis point increase – between its draft and final pricing decision – has not been fully justified.

An appropriate target return for Auckland Airport may be above our mid-point WACC estimate

71. Despite this conclusion, we consider that not all of the additional $37m profit due to the airport's higher target return on its priced services necessarily represents excessive profits.

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58 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 64.

59 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 135.

60 We have estimated the total per passenger impact over the 5 year period using total passenger volumes (this includes domestic, international, and transit and transfer passengers).

72. Overall, we consider there is some evidence indicating an appropriate target return for Auckland Airport *may* be above our mid-point WACC estimate. However, there is inconclusive evidence to persuade us that any difference is likely to be of a sufficiently meaningful magnitude to support Auckland Airport's targeted return.

73. Our full analysis underpinning this conclusion on Auckland Airport's target return on its priced services is set out in **Attachment A**.

Reviewing returns on other regulated services over a longer timeframe

74. We do not consider that Auckland Airport has sufficiently justified its expected return of 7.9% on its other regulated services.

75. However, we consider that an airport's returns on other regulated services are likely to be better assessed over a longer timeframe. The individual contracts that apply to these services have varying durations and start dates that are not necessarily well aligned with the five-year PSE3 pricing period. In addition, there are a wide range of factors – such as market conditions, rent reviews and break clauses – that can affect the prices under the contracts that apply to these services.

76. Other regulated services represent a small proportion of Auckland Airport's RAB, currently, only about 8%. We have estimated Auckland Airport's expected return on these services to be 7.9% over the PSE3 period.

77. Any review of services under bilaterally negotiated contracts would account for the context of a particular airport. For example, any review would be proportionate to the size of other regulated services and take into account concerns that have been raised by counterparties about customers' limited bargaining position when entering into these contracts.

Auckland Airport is expected to earn additional returns from its second runway assets

78. Upon commissioning of the second runway (signalled for 2028) Auckland Airport will be able to include assets it is currently holding for the development of this runway in its RAB. These assets will be capitalised using the airport's own target return.

79. At the end of PSE3, we estimate the value of these assets to be about $10m (or 3%) higher than they would be valued using our mid-point WACC estimate of 6.41%, or $8m higher in today's dollars (at the beginning of the PSE3 period). This $8m is separate to the additional $37m of post-tax revenue the airport is expected to earn above our mid-point WACC estimate on its priced services over PSE3.[61]

80. We note that this expectation of an increase in asset value arises due to the airport targeting a return above our mid-point WACC estimate with the precise amount dependent on the level of the RLC. The role of the RLC is to bring the additional revenue, associated with the holding costs of second runway assets, forward in time.

[61] We have assumed the RLC is set at the level forecast by Auckland Airport when estimating the difference in asset values at the end of PSE3.

The RLC itself, as proposed by Auckland Airport, does not raise concern about the airport earning excessive profits over PSE3. This is discussed in **Attachment B**.

Auckland Airport's forecasts do not raise significant concerns

81. We do not have any significant concerns with Auckland Airport's forecasts underpinning its expected revenues and returns. Accordingly, we have used the airport's forecasts as a basis for assessing Auckland Airport's expected profitability. This includes the airport's forecast asset values, demand, operating expenditure, capital expenditure and the RLC.

82. See **Chapter 3** for our analysis on capital expenditure and **Attachment B** for our analysis on other forecasts, including more comprehensive analysis on the RLC.

Our approach to assessing Auckland Airport's expected returns

83. In considering whether we expect Auckland Airport to earn excessive profits over PSE3, we have used our mid-point cost of capital estimate provided for in our IMs as our starting point. Against this, we have considered the extent to which the airport's target returns above our mid-point estimate are likely to promote the long-term benefit of consumers. The onus is on airports to provide sufficient reasoning as to why their targeted returns may be above the mid-point WACC estimate, which we publish in advance. Any reasoning needs to consider the long-term benefits of consumers.

84. As part of this, we have:

    84.1 estimated Auckland Airport's expected returns over PSE3 using an internal rate of return (IRR) calculation. The IRR allows us to assess the airport's expected returns across the remaining lifetime of the assets used in supplying regulated airport services during the PSE3 period.

    84.2 calculated the return we expect Auckland Airport to earn over the PSE3 period, based on: the prices it has set, its forecast passenger volumes and aircraft movements, and its forecast costs.

    84.3 carefully reviewed the reasons why the airport has used different parameters or approaches from those set out in the ID requirements, when establishing our estimate of Auckland Airport's expected return. With the exception of Auckland Airport's higher target return, Auckland Airport's parameters were consistent with our IMs.

    84.4 We have compared Auckland Airport's expected return to our estimate of the cost of capital that would be expected for airport businesses with similar risk at the time prices were set. This is our mid-point WACC estimate of 6.41%.[62]

[62] Commerce Commission "Cost of capital determination for information disclosure year 2018 for electricity distribution services and specified airport services (March year-end disclosure year)" (28 April 2017).

85. **Attachment C** outlines our methodology for this profitability assessment in more detail.

We assess Auckland Airport's expected returns against our mid-point WACC estimate

86. Our approach of comparing Auckland Airport's expected returns to our mid-point WACC estimate is consistent with our 2016 IM Review. As noted in the IM Review, a precise WACC for Auckland Airport is unobservable to both us and Auckland Airport itself.[63] However, we consider our mid-point WACC estimate of 6.41%, using the methodology set out in the IMs, to be the appropriate starting point when assessing target returns for profitability analysis.

87. In the IM Review we changed our approach to disclosing WACC, due to two main problems with the previous framework:[64]

    87.1 the upper limit of our WACC range had become the de facto benchmark when assessing airport profitability; and

    87.2 there was limited and weak rationale for using the 75th percentile as the upper limit of the WACC percentile range.

88. Given airports are not subject to price-quality path regulation and are not required to apply our mid-point WACC estimate, it is not necessary to specify a particular WACC percentile estimate. Airports are still required to provide evidence that provides an explanation for differences between their targeted returns and our mid-point WACC estimate, and their target return and their WACC.[65] They may also use the standard error to report the equivalent percentile. In contrast, we have specified the 67th percentile WACC estimate for setting price-quality paths for electricity lines and gas pipeline businesses.

89. We noted that this approach:[66]

    89.1 enables flexibility in assessing the acceptability of airport returns, and will reduce the focus of any assessment on the upper limit of the range; and

    89.2 will provide flexibility to enable any assessment to take into account different contextual factors affecting an airport's required return expectations, or the expectations of a particular project.

90. Within this framework, we accept there may be legitimate reasons for an airport to target a different return to our mid-point WACC estimate and we require airports to provide evidence to explain such differences.[67]

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63 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 64.

64 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph X4.

65 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 99.

66 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), page 3.

We assess Auckland Airport's forecasts underpinning its expected returns

91. We have considered the appropriateness of Auckland Airport's forecasts underpinning its expected returns. This includes Auckland Airport's forecast asset values, demand, operating expenditure, capital expenditure and RLC. Our analysis of these values and forecasts is discussed in **Chapter 3** (forecast capital expenditure) and **Attachment B** (forecast asset values, demand, operating expenditure and the RLC).

92. Overall, we do not have any significant concerns with Auckland Airport's forecasts underpinning its expected returns and consider the airport's forecast cash flows are suitable for the cash flows used in our IRR calculation. Accordingly, we have used the airport's forecasts as a basis for assessing Auckland Airport's expected profitability.

Auckland Airport's expected returns on its regulated asset base

93. Our own analysis indicates that Auckland Airport's expected returns on its RAB is 7.1% for the PSE3 period and beyond (ie, from 1 July 2017 over the remaining life of the assets). This expected return is:

    93.1 greater than our mid-point WACC of 6.41%, published in our WACC determination; and

    93.2 consistent with Auckland Airport's disclosed target return on its total RAB of 7.06%.[68]

94. These expected returns are compared in Table 2.1 below, along with the associated expected revenues.

[68] All estimates of expected returns generated from our own analysis are provided to 1 decimal place.

Table 2.1 Summary of Auckland Airport's expected returns and revenue

	Key returns	Expected Revenue	WACC percentile
Our assessment of Auckland Airport's expected return on its total RAB	7.1%	$1,559m	67th
Auckland Airport's target return on its total RAB	**7.06%**	**$1,559m**	**67th**
This comprises of:			
Auckland Airport's target return on its priced assets (about 91.5% of the RAB)	6.99%	$1,441m	65th
Auckland Airport's expected return on its other regulated assets[69] (about 8.5% of the RAB)	7.9%	$118m	85th
Less	**65 basis points**	**$65m[70]**	**N/A**
This comprises of:			
impact from priced assets	58 basis points	$53m	
impact from other regulated assets	149 basis points	$11m	
Equals our mid-point cost of capital estimate	**6.41%**	**$1,494m**	**50th**

Value and impact of Auckland Airport's expected returns

95. As shown in **Table 2.1**:

95.1 Auckland Airport's target return of 7.06% is consistent with expected revenue of $1,559m over PSE3, in present value terms.

95.2 Auckland Airport's disclosed target return on its RAB of 7.06% is a weighted average of its:

95.2.1 target return of 6.99% on its priced services, which apply standard prices, and are consulted on, over the five-year PSE3 period. Priced services represent about 91.5% of the RAB and include the use of airfield runways and taxiways, air-bridges and baggage handling services.

95.2.2 expected return of 7.9% on other regulated services, which are priced under individual contracts with varying start dates and durations that do not necessarily align with the five-year PSE3 pricing period. Other regulated services represent about 8.5% of the RAB and may include terminal lounges, and facilities and services for the operation of customs, immigration, quarantine

69 This figure was not disclosed by Auckland Airport. We have estimated it based on Auckland Airport's disclosed target return on its total RAB and its target return on priced assets.

70 This revenue is based on our estimate of the difference between the revenues expected to be generated by Auckland Airport over PSE3 and the revenues consistent with our mid-point cost of capital estimate of 6.41%, estimated to 1 decimal place (using mid-year cash flows).

checks, security and police services, refuelling of aircraft, and storage of freight.

95.3 Auckland Airport's expected revenue of $1,559m is about $65m above the $1,494m revenue that would be consistent with our mid-point WACC estimate of 6.41%. Of this $65m additional revenue:

95.3.1 about $53m relates to charges on priced assets. Over the five-year period, this is expected to result in airport customers paying an additional 50 cents per flight on average, and Auckland Airport earning an additional $37m in profit, after accounting for tax. [71]

95.3.2 about $11m relates to charges on other regulated assets. These charges are applied under individual contracts to customers including the Government (eg, police and MPI), airlines, and other businesses. These charges will be passed on to New Zealanders in a variety of ways, including through general taxation and flight fares.

96. Below, we discuss:

96.1 the appropriateness of Auckland Airport targeting a return on its priced assets above our mid-point WACC estimate (6.99% compared to 6.41%, or about $53m in additional revenue); and

96.2 the appropriateness of Auckland Airport's expected return on its other regulated assets (7.9%), including our decision to review these returns over a longer period of time.

97. Our key consideration is the extent to which Auckland Airport's higher target returns are likely to promote the long-term benefit of consumers.

Auckland Airport's target return on its priced services

98. Priced services are the most significant group of regulated services, representing about 91.5% of Auckland Airport's RAB. These services include the use of airfield runways and taxiways, air-bridges, and baggage handling services, and apply standard pricing terms, which are consulted on with 'substantial' customers (at least) every five years.

99. Auckland Airport's target return on its priced services is 6.99%. This is higher than our mid-point WACC estimate of 6.41% and equivalent to the 65th percentile of our WACC range, estimated as at 1 April 2017.

[71] We have estimated the total per passenger impact over the 5 year period using total passenger volumes (this includes domestic, international and transit and transfer passengers).

Auckland Airport provided evidence to explain its target return on priced services

100. Auckland Airport has targeted a return on its priced services above our mid-point WACC estimate of 6.41%. Auckland Airport considers it has both a higher cost of equity and a higher cost of debt.

101. Auckland Airport considers it has a higher cost of equity than our benchmark owing to a greater exposure to systematic risk (ie, a higher asset beta). Reasons given by Auckland Airport for a higher asset beta include:

101.1 Auckland Airport expects its operating leverage to increase over the PSE3 period, due to its large capital expenditure programme;[72]

101.2 the observed asset beta of Auckland Airport from recent market data is higher than our estimate;[73]

101.3 the comparator sample used to estimate the asset beta in the Airports IMs does not contain airports that are sufficiently comparable to Auckland Airport; and[74]

101.4 Auckland Airport has a higher proportion of 'long-haul' passenger movements and so is more exposed to cyclical movements of oil prices.[75]

102. Auckland Airport has used its own forecast cost of debt for the PSE3 period of 4.52%, instead of our benchmark estimate of 4.41% (as at 1 April 2017 for an A- rated airport).

103. The airport's use of a higher cost of equity owing to its expectation of greater exposure to systematic risk (ie, a higher asset beta) is the most material of these two factors. Auckland Airport did not provide a specific asset beta estimate which was used to determine its target return, but we have assessed it to be 0.08 above our benchmark of 0.60.

104. Of the 58 basis point difference between Auckland Airport's target return (6.99%) and our mid-point WACC estimate (6.41%), 56 basis points are due to its use of a higher cost of equity owing to its expectation of higher exposure to systematic risk (ie, a higher asset beta) while 2 basis points are due to its higher cost of debt.

105. We note that Auckland Airport introduced new evidence to support its target return, after the publication of our draft report.[76] While we have considered this evidence, we note that including this in its PSE3 disclosure would have provided greater

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72 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 78c.

73 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 93c. AIAL sub

74 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 78a.

75 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 120.

76 See paragraphs A57 to A65.

transparency and allowed interested parties to better understand, and engage with, Auckland Airport's expected performance.

Our views on Auckland Airport's evidence for its target return on priced services

106. Having considered the reasons and evidence provided by Auckland Airport, we are not persuaded that Auckland Airport's target return of 6.99% on its priced services, over PSE3 promotes the long-term benefits of consumers, when compared to our mid-point WACC estimate of 6.41%.

107. We accept that Auckland Airport's investment plans are likely to increase risk to Auckland Airport, particularly given their significant size. However, we are not persuaded that Auckland Airport will experience an increase in undiversifiable risk, which affects its cost of capital, to the extent it suggests. For this reason, we are not satisfied that Auckland Airport has provided sufficient reasons and evidence to justify its target return over the PSE3 period.

108. We have carefully considered the evidence provided by Auckland Airport on the reasons for its higher target return, noting the inherent uncertainty in estimating an appropriate cost of capital. In this case, we have not been persuaded that Auckland Airport's higher target return is likely to result in benefits to consumers (eg, a lower risk of underinvestment) that outweigh the additional costs paid through higher charges.

109. Despite this conclusion, we consider there is some evidence indicating an appropriate target return for Auckland Airport may be above our mid-point WACC estimate. On this basis, we consider that not all of the additional $37m profit, associated with its higher target return of 6.99%, necessarily represents excessive profits.

110. In particular, we consider there is some merit to Auckland Airport's view that its:

    110.1 observed beta is higher than the comparator sample, though we note the difficulties using a single company estimate and isolating the impact from aeronautical and non-aeronautical services; and

    110.2 capital investment may increase operating leverage, though we consider any effect on asset beta is likely to be small in magnitude.

111. However, overall we do not consider the evidence provided by Auckland Airport in support of these views provides sufficient reasons to justify its higher WACC over the PSE3 period that satisfies us that its target return is in the long-term interests of consumers.

112. Below we respond to key evidence and reasons provided by Auckland Airport to support its target return of 6.99%. Further discussion on this can be found in **Attachment A**.

    112.1 In our view, Auckland Airport has not sufficiently demonstrated that its operating leverage will be sufficiently higher than the average of the sample

of comparator companies used to generate our asset beta estimate. In addition, we consider that Auckland Airport's approach of focussing on estimates of its own asset beta (rather than a comparator sample-based approach) leads to a significant risk of estimation error.

112.2 Regarding the cost of debt, we have used our estimate of 4.41% (as at 1 April 2017) as an input to the WACC used when assessing Auckland Airport's profitability. We note that our estimate is materially similar to Auckland Airport's own forecast cost of debt. However, we consider that the 20 basis point increase Auckland Airport applied between its draft and final pricing decisions may be overstated.

113. We acknowledge that estimating an appropriate cost of capital, and in particular an appropriate asset beta, is difficult. Several submissions stated that all estimates are subject to a high degree of uncertainty.[77] We therefore have to use a significant degree of judgement when considering the reasoning and evidence provided by Auckland Airport to justify their application of an asset beta uplift.

114. Taking into account this uncertainty, we have not been persuaded that the reasons and evidence provided by Auckland Airport are sufficient to justify an uplift to its asset beta of 0.08. This is discussed below.

Our assessment of Auckland Airport's views on operating leverage

115. Auckland Airport's expectation that it will incur greater exposure to systematic risk means it has effectively proposed an adjustment to our asset beta. An adjustment to our asset beta estimate may, in principle, be justified if a supplier can demonstrate that:

115.1 its operating leverage is (or is expected to be) significantly higher than the companies in our comparator sample; and

115.2 the difference is of a magnitude that can reasonably be expected to meaningfully impact asset beta.

116. Conceptually, we agree that Auckland Airport's forecast increase in capital expenditure may increase its operating leverage, and that any increase in operating leverage may increase Auckland Airport's exposure to systematic risk. This could justify an uplift to our asset beta and therefore could justify a target return above our mid-point WACC of 6.41%.

117. However, based on the evidence before us, we are not convinced that Auckland Airport's:

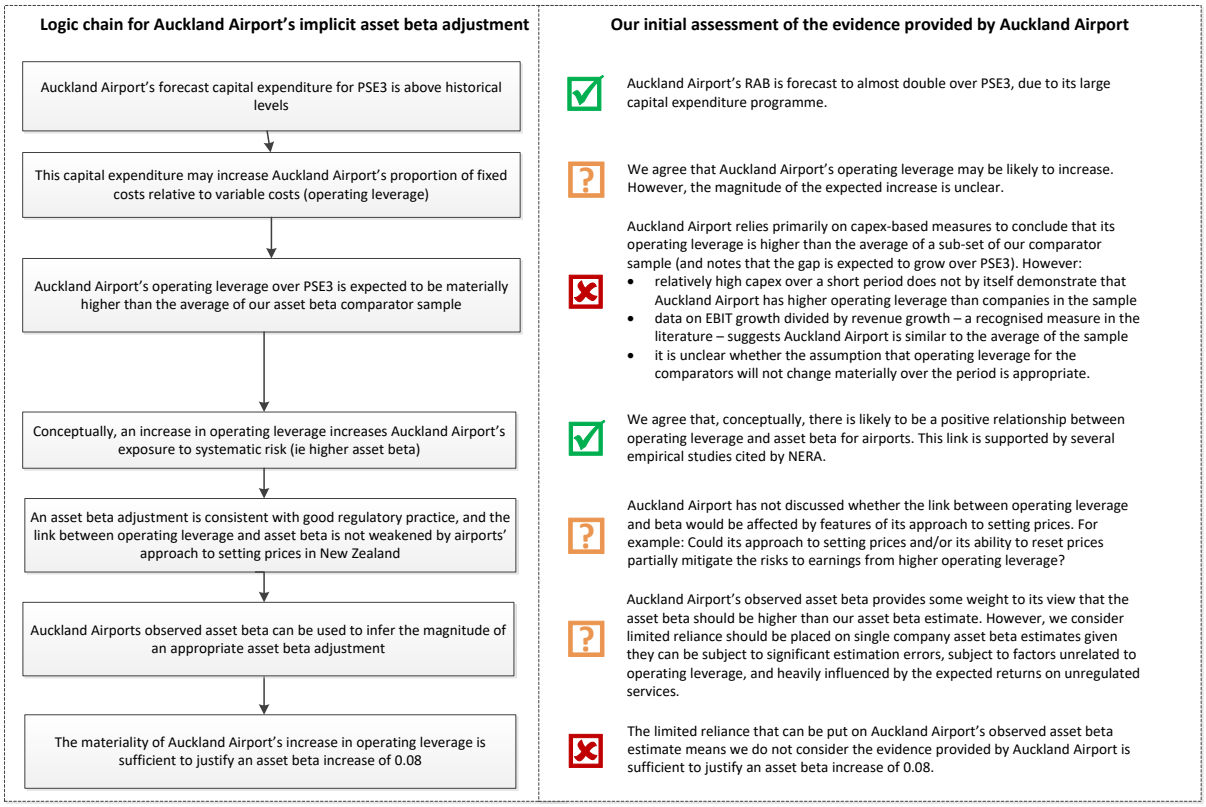
117.1 current operating leverage is above the average operating leverage of the 26 companies in our asset beta comparator sample; or

[77] For example: Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 20.

117.2 forecast operating leverage over the PSE3 period will be significantly above the average operating leverage for the companies in our comparator sample, to justify an (implicit) increase in asset beta of 0.08.

118. Therefore, we consider that Auckland Airport's implicit adjustment to asset beta has not been sufficiently justified. Our initial assessment of Auckland Airport's implicit asset beta adjustment is summarised in Table 2.2 below.

Table 2.2 Summary of our assessment of Auckland Airport's implicit asset beta adjustment



Our assessment of Auckland Airport's views on its own observed asset beta

119. Auckland Airport has provided information on its observed asset beta which it uses to indicate its asset beta is higher than estimated from our comparator sample and is increasing.

120. Our analysis shows that there has been an observed increase in asset beta for Auckland Airport over recent years. This is consistent with NERA's submission, on behalf of Auckland Airport.[78] We also note that Auckland Airport's asset beta has been consistently above the equivalent estimated asset beta from our comparator sample, for a number of years.

120.1 Auckland Airport claims this evidence shows the impact of increased operating leverage. However we do not consider the conceptual reasoning

78 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.2.

persuasive; the observed increase in beta could arise from factors other than changes in operating leverage.

120.2 Although Auckland Airport's actual beta is a useful reference point, we consider that beta estimates for a single company and over shorter reference periods are unreliable. Asset betas are 'noisy' and there is a significant risk of estimation error when focussing on the observed beta for an individual company. For this reason, we have used a comparator sample approach when determining beta estimates in the IMs.[79]

121. Another key consideration when analysing Auckland Airport's observed asset beta is that the beta for Auckland Airport reflects the entire business, not just the regulated aeronautical activities. The Major Electricity Users' Group (MEUG) submitted to the Process and Issues paper that "[g]reat care is needed if the Commission decides to apply an AIAL specific asset beta analysis given the RAB weighting is a small fraction of the market enterprise value of AIAL".[80]

122. This seems particularly relevant given the value of the unregulated portion of Auckland Airport[81] has been growing significantly faster than the regulated portion and is now approximately 85% of the total value of the business.[82] We would expect this to significantly affect the observed level of asset beta.

123. For example, growth in the value of the unregulated element of the business would be expected to result in an increase in the asset beta of the whole business without necessarily affecting the asset beta of the regulated element of Auckland Airport. No evidence has been provided on this aspect.Therefore, we consider it is appropriate to focus on evidence regarding an adjustment from our comparator sample-based asset beta estimate of 0.60, instead of estimates of Auckland Airport's own asset beta.[83]

124. There may also be other unknown factors that have affected the systematic risk of the unregulated business and which have shown up in observations of Auckland Airport asset beta, but which do not affect the asset beta of the regulated businesses.

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79 Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraph 266.

80 MEUG "Cross-submission on airport price setting event PSE3" (26 January 2018), paragraph 7.

81 Assuming the unregulated portion of Auckland Airport's business is equivalent to the Enterprise Value minus the value of the regulated asset base (RAB).

82 The exact proportion of unregulated to regulated revenues will vary over time dependent on Auckland Airport's share price movements and changes to the RAB. As an indication, we have compared TDB's estimate of total enterprise value from June 2018 (10.5bn) with the forecast RAB provided by Auckland for the end of June 2018 as part of their PSE pricing disclosure (1.4bn). This suggests that the regulated business is ~13% of the total value of Auckland Airport. See: TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 9; Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), schedule 18(vii).

83 We also note that Auckland Airport's approach of focussing on estimates of its own asset beta would not be possible for the other regulated airports in New Zealand. Given that Christchurch and Wellington airports are not publicly listed, asset beta estimates are not available.

125. A submission from First Economics notes that UK practice has been to focus on individual beta estimates.[84] This may be appropriate in certain circumstances but it appears more appropriate when using data from UK airports which have a single till without the potential for a separate unregulated element of the business to have a significant effect on returns.

126. However, despite all of the described difficulties of assessing the implications of the observed asset beta estimates, we consider Auckland Airport's observed asset beta does have some relevance as a reference point. We consider it gives some weight to Auckland's view that an appropriate asset beta could be higher than our mid-point estimate.

127. Nonetheless, we do not consider this information can, by itself, justify a departure from our mid-point WACC estimate. In our view, asset beta estimates for a single company and over a limited period of time are not sufficiently reliable. We also note the significant influence of unregulated revenues on Auckland Airport's asset beta, which further reduces the reliability of this estimate.[85]

128. After assessing the evidence, and in particular the strong effect of expected unregulated revenues on the observed asset beta, on balance, we do not consider the observed asset beta can be used to explain a 0.08 asset beta adjustment to the regulated business.

Our assessment of Auckland Airport's views on the asset beta comparator sample

129. NERA suggests that our comparator sample used to estimate asset beta includes airports subject to a different regulatory regime to Auckland Airport.[86] In particular, they consider a number of airports in the comparator sample have the ability to reset prices more frequently than Auckland Airport and therefore should be excluded from the sample.[87] NERA also suggests that we should remove companies from the comparator sample for stocks that are below a certain liquidity threshold.[88]

130. We do not consider changes to the comparator sample are necessary for the following reasons.

    130.1 NERA focussed on one aspect of the regulatory regime (ability to reset prices) in removing comparators, without considering other aspects of the regulatory

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84 First Economics "Auckland Airport's estimate of beta: Prepared for Auckland Airport by John Earwaker and Dr Harry Bush" (May 2018), pages 13-14.

85 It is noteworthy that the enterprise value of Auckland Airport has grown significantly compared to the regulated asset base (RAB). The value of the RAB is currently approximately 10-15% of the total enterprise value of Auckland and has been shrinking as a proportion for a number of years. An increasing proportion of value associated with non-aeronautical (unregulated) services is likely to increase the asset beta of the whole company without necessarily affecting the asset beta of regulated services.

86 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.

87 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.1

88 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.2

environment in which the comparators operate. Other aspects of the regulatory environment may also be different to Auckland Airport.

130.2 We have already used a liquidity filter to remove comparators with low liquidity and NERA have not provided reasons why they consider an alternative would result in improvements to the asset beta estimates.

130.3 There were significant amounts of analysis and consultation that preceded the setting of our mid-point WACC estimate (including the make-up of the comparator sample). We therefore consider significant weight should be put on this estimate as a starting point for assessing airport returns and any explanation for a higher return should be with reference to this starting point.

Our assessment of Auckland Airport's views on other issues affecting its target return

131. Auckland Airport suggests that it has a higher proportion of long-haul passengers than other airports, and that long-haul travel is more sensitive than short-haul travel to oil price movements. As a result, Auckland Airport suggests that the systematic risk associated with these long-haul passengers is higher because a higher jet fuel price also negatively impacts general economic performance.[89]

132. This may have some effect on asset beta, but we consider more information would be required before we could judge the significance of any impact on asset beta. For example, the following information would be useful.

132.1 How the proportion of long-haul passengers at Auckland Airport compares to other airports.

132.2 How the proportion of long-haul passengers impacts overall demand and thus systematic risk. For example, other airports may have a higher proportion of short-haul passengers, but potentially greater competition from other travel options (eg, express trains) which may become more viable options as jet fuel prices increase.

132.3 How long-haul and short-haul passengers are split between foreign and domestic consumers. A higher proportion of long-haul passengers may also indicate a higher proportion of foreign consumers whose demand is less aligned with New Zealand market conditions. This could potentially reduce systematic risk.

133. Overall, the potential for many different factors to affect systematic risk to varying degrees of magnitude means that we are relatively cautious in considering departures from the asset beta used in our mid-point WACC estimate. It is also why we are keen to emphasise the need for airports to provide clear evidence including the consideration of any countervailing effects in explaining a change to asset beta.

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89 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 120.

Auckland Airport's expected return on its other regulated services

134. Other regulated services are a much smaller portion of regulated services, representing about 8.5% of Auckland Airport's RAB. These services may include terminal lounges, and facilities and services for the operation of customs, immigration, quarantine checks, security and police services, refuelling of aircraft, and storage of freight.

135. We estimate Auckland Airport's expected return on its other regulated services is about 7.9%. This is higher than the 6.99% it is targeting on its priced services and our mid-point WACC estimate of 6.41%.

136. We estimate Auckland Airport will earn about $118m revenue on its other regulated services over PSE3 in present value terms. This is $11m (under 10%) more than the revenue associated with these assets that would be consistent with our mid-point WACC estimate of 6.41%.

137. We do not think comparing Auckland Airport's expected return on its other regulated assets to our mid-point WACC estimate provides interested parties with useful information to assess whether Auckland Airport is extracting excessive profits.

138. In other words, the additional $11m revenue it can be expected to earn on these services (compared to revenue consistent with our mid-point WACC) may not necessarily provide much information on whether those returns are excessive. This is because the characteristics of the individual contracts that apply to these services (eg, the varying durations and start dates) are not necessarily well aligned with our mid-point WACC estimate, which is consistent with the five-year PSE3 pricing period.

139. We consider that an airport's returns on other regulated services can be better assessed over a longer timeframe.

140. Submissions from both airports and airlines broadly agreed with our view that these services can be assessed over a longer timeframe. Further details on the submissions we received on this topic to both the Christchurch and Auckland Airport reports are provided from paragraph 147 below.

Auckland Airport's explanation for differences in returns on priced and other regulated services

141. Auckland Airport stated that it has not targeted a particular WACC estimate for other regulated services, noting that forecast revenue for other regulated services is based on revenue from negotiated leases (which do not necessarily align with the five-yearly pricing cycle for priced services).[90] This compares to the airport's forecast revenue for priced services, which is determined using a building blocks model at each five-yearly price setting period – where the target return is a key input.

[90] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 6.

142. In response to our draft report, Auckland Airport expanded on the factors that affect its other regulated services, noting the following points.

142.1 Commercial lease agreements do not tend to a use business or regulatory WACC. Valuers use market return measures widely recognised in the property sector.[91]

142.2 If a regulatory WACC estimate was used to assess returns on negotiated leases, there would have to be a number of different WACC estimates to correspond to leases that have different start times and lease lengths.[92]

142.3 Land valuation and cost allocation approaches under lease agreements are different to the IMs and would require changes to accepted commercial practice to make them comparable.[93]

142.4 The lease agreements do not allow the valuers or dispute resolution mechanisms to take into account a regulatory WACC under the terms of the existing contracts.[94]

142.5 Other regulated services only make up 8% of total regulated revenue and have not been a focus of airline customers. [95]

143. This explanation is similar to that provided by Christchurch Airport regarding its own contracts with individual customers for other regulated services.[96]

It is difficult to assess individual contracts over a given five-year pricing period

144. We accept that prices set in bilaterally negotiated contracts for other regulated services are affected by a range of factors, including market conditions (eg, interest rate expectations), rent reviews and break clauses. These factors, and the volume of different contracts at any one time, make it difficult to determine whether returns on these contracts – over a given five-year pricing period – are appropriate.

145. In principle, the extent to which an assessment of the returns on these contracts, against our mid-point WACC, is more or less appropriate will depend on:

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91 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 170.a.i.

92 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 170a.i.

93 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 170a.ii and iii.

94 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 170c.

95 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 150b and c.

96 Commerce Commission "Review of Christchurch International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (19 July 2018), paragraphs 110-114.

145.1 the extent to which the market conditions when the contracts were signed (eg, level of interest rates) are similar to today's market conditions;

145.2 the degree to which rent reviews or break clauses within a contract can adjust original pricing arrangements over the five-year pricing period;

145.3 the competitive environment in which any contracts were signed (eg, the degree to which airports use their market power when negotiating longer-term agreements, or whether there are feasible alternatives to the contract, such as a standard pricing contract); and

145.4 how the existing contracts that the airport has with its customers match-up with its current target returns for other regulated services.

146. In light of this, we invited feedback on our approach to assessing other regulated services and how we should consider returns on negotiated contracts. We noted that we consider it appropriate to apply some flexibility in our assessment of these services and that it may be better to assess returns on these services over a longer period of time.[97]

Submitters provided feedback on how we review other regulated services

147. We received a number of submissions to both the draft report for Auckland Airport and the draft report for Christchurch Airport outlining support for a longer-term assessment of other regulated services.

148. For example NZ Airports suggested:[98]

> As noted in our submission on the Christchurch Draft Report, NZ Airports agrees with the Commission's acknowledgement that flexibility in its assessment of non-priced services is required. Accordingly, it is more appropriate to assess target returns for these services over a longer period of time than the current five year pricing cycle.

149. BARNZ suggested that the approach should be aligned with the approach taken for Christchurch Airport, and on which they submitted:[99]

> We would be open to exploring options for reviewing returns on these services over different timeframes than a standard 5-year pricing period. We think the starting point is to gather more information (at an aggregate level) about the nature of the services, the timeframes of the contracts and how the charges are set. Once there is a clear understanding of the nature of the other regulated services and how their pricing is structured, it should be possible to identify a way forward that can provide sufficient comfort that the charges are reasonable.

150. Air New Zealand also noted:[100]

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97 Commerce Commission "Review of Christchurch International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (19 July 2018), paragraphs 115-128.

98 NZ Airports "Cross-submission on the Commisson's Auckland Airport draft report in light of the Christchurch Airport draft report" (23 August 2018), paragraph 49.

99 BARNZ "Cross-submission on Auckland Airport pricing in light of Christchurch Airport Draft Report" (21 August 2018), paragraph 6.

> Air NZ believes it is appropriate that greater flexibility be applied when considering returns on other regulated services, with analysis of these considered over the longer term, generally reflecting the tenure of contractually agreed arrangements and the nature of those arrangements (e.g. provision for rent reviews, etc). Air NZ also agrees with the Commission that lower returns on other regulated services should not be offset by higher returns on priced services.

151. Stakeholders appear to agree with our approach to undertake a longer term assessment of other regulated services. However we acknowledge that the details of any assessment still need to be considered in more detail.

152. We also note the concerns raised by Air New Zealand and BARNZ about the commercial environment under which leases are agreed and the degree to which Auckland Airport can use its market power in setting prices for these services. For example, Air New Zealand suggested:[101]

> …AIAL brings significant monopoly power to the negotiations, such that agreements are not negotiated as they would be in a competitive market. The premium AIAL has been able to achieve for provision of what airlines consider essential services is evidence of the imbalance of power in the negotiation process.

153. On the other hand, Auckland Airport considers its leasing and rental review process for other regulated service contracts to be highly disciplined, and applying the same dispute resolution protections available to customers leasing properties in competitive markets.[102]

154. Specifically, Auckland Airport notes that if the leasee disputes the proposed market rental, parties will negotiate. It states that about 70% of its lease negotiations are resolved by parties agreeing to a valuation (prepared by their respective valuers) or by agreeing to "split" the difference. It also notes, where no agreement can be reached parties may request the matter go to arbitration so that the decision and negotiation can be reached via an independent third party (taken in about 3% of Auckland Airport's lease negotiations).[103]

155. BARNZ suggested more detailed information should be obtained from airports through information disclosure or a section 53ZD notice to ensure counterparties to Auckland Airport's leases have confidence that the charges they are paying are reasonable.[104]

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100 Air New Zealand "Re: Review of Christchurch International Airport's pricing decisions and expected performance (July 2017 – June 2022)" (16 August 2018), paragraph 38.

101 Air New Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), page 2.

102 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 162.

103 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 159-160.

104 BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 18.

156. Auckland Airport encouraged us to place greater emphasis on actual returns disclosed over time when reviewing other regulated services, rather than forecasts disclosed at the time of the five-yearly price setting event.[105]

157. As part of any further assessment, we would consider whether any additional information is required from airports to assess the reasonableness of returns on other regulated services. Further information may be useful but, as previously stated, we consider any review of other regulated services needs to be flexible and proportionate to the magnitude of these services, as provided by individual airports.

Our views on Auckland Airport's returns on other regulated services and how we assess these returns over the long-term

158. As indicated in our draft report on Christchurch Airport, our view is that an airport's returns on individual contracts for other regulated services are better assessed over a longer period of time.[106]

159. We consider a consistent approach across airports is appropriate, although the specific details of any ex-post assessment may vary to account for the context of different airports. For example, any assessment would need to be proportionate to the size of other regulated services and take into account concerns that have been raised by counterparties.

160. We also do not wish to discourage commercial agreements between parties when the contract provides mutual benefits and the airport's market power has not unduly affected the terms of the contract. However, there can be limited competition in relation to the airport's supply of other regulated services, which limits customers' bargaining position.

161. A review of the returns associated with other regulated assets could potentially be included as part of an ex-post review of airport performance, which we expect to undertake after Wellington Airport has completed its first five-year pricing period in 2019. A review could consider both:

    161.1 the achieved return by airports over a longer period of time and how it compares to measures of the mid-point WACC estimate over time and the reasons for any differences; and

    161.2 the process for agreeing negotiated leases and rent reviews.

162. We consider that this approach will provide scrutiny over the performance of these contracts in a way that balances the following objectives:

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105 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 154.

106 Commerce Commission "Review of Christchurch International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (19 July 2018), paragraph 115-124.

162.1 recognising there is likely to be limited competition in relation to the airport's supply of other regulated services, which limits customers' bargaining position;

162.2 ensuring we do not discourage efficient contracts, which are in the long-term interest of consumers;

162.3 applying a consistent approach over time, ie, continuing to assess returns on other regulated services separately from priced services so that lower or higher returns on one group of services is not considered to "offset" the other group of services; and

162.4 proportionality to the size of the harm – we consider the possible harm to consumers over the long-term from these contracts is likely to be significantly smaller than priced services, given the relatively smaller size of these services

Auckland Airport is expected to earn additional returns from its second runway assets

163. Auckland Airport is intending to build a second runway to accommodate future growth. The second runway is currently forecast to be commissioned in 2028.

164. The airport currently owns assets that it is holding for the future development of this second runway, including land. These assets are:

164.1 classified as 'assets held for future use' under the Airport ID Determination;[107] and

164.2 valued by the formula:[108]

base value + holding costs – net revenue – tracking revaluations.

165. Assets held for future use are excluded from an airport's disclosed RAB and from associated disclosed profitability measures until they are used in the supply of regulated airport services (in this case, until the land has been used in the development of the second runway).[109]

166. Requiring that land is being used before it enters the RAB places the risk of non-development on airports (ie, profits will appear excessive if airports attempt to earn a return on the value of the land before it is developed in order to supply regulated airport services).[110] Given that airports are best placed to manage the risk of non-

[107] Such land is also referred to as excluded assets, land held for future use and future development land.

[108] *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.11.

[109] *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.1 and definition of "excluded assets".

[110] That said, the risks for airports are modest under an information disclosure regime, not least because land could potentially be sold, given that it has a value in an alternative use. Any residual risk relates to holding and development cost.

development, it is reasonable that they are the ones that are required to bear this risk.

167. The IM Determination allows airports to use their own cost of capital estimate when calculating the holding costs of assets held for future use.[111] This is because, under section 53F(1)(b) of the Act, regulated suppliers subject to only information disclosure regulation, such as airports, do not have to apply any IMs we have set for evaluating or determining the cost of capital.

168. This means Auckland Airport is able to:

168.1 recognise the cost of holding its assets held for future use at its target return, which is higher than our mid-point WACC estimate; and

168.2 include these assets in its RAB once they are used in the development of the second runway, capitalised using its own target return.

169. As a result of this, we expect the airport to earn returns above our mid-point WACC estimate of 6.41% from its second runway assets, which we consider it has not sufficiently justified. This is on account of our view that we are not persuaded that Auckland Airport has sufficiently justified its target return on its priced services of 6.99%.

170. Specifically, at the end of PSE3, we estimate that the value of Auckland Airport's assets held for future use will be about $10m (or 3%) higher than they would be using our mid-point WACC estimate, or $8m higher in today's dollars (at the beginning of the PSE3 period). This $8m of potential returns is separate to the additional $37m the airport is expected to earn on its priced services over the PSE3 period above our mid-point WACC estimate.[112]

Auckland Airport is introducing a runway land charge

171. Auckland Airport has decided to introduce a runway land charge (RLC) to recover the forecast holding costs on the land to be used for the initial stage of the second runway. The airport considers calculating the charge on this basis to be a conservative approach as it is yet to determine if a full or staged runway development is optimal.[113]

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111 Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), paragraph C10.6.

112 We have assumed the RLC is set at the level forecast by Auckland Airport when estimating the difference in asset values at the end of PSE3.

113 A staged approach would potentially see an initial stage runway of 2,265m followed by a final stage runway of 2,983m. Auckland Airport has undertaken analysis of the land parcels associated with enabling the initial stage of the second runway, and has determined that these parcels represent 68% of the total land held for future use value. Building a full-length runway in one stage also remains a possible option.

172. Auckland Airport states the RLC will be a net present value (NPV)-neutral charge (at the airport's own cost of capital) that will be tracked in a transparent way over time against the carrying value of its assets held for future use.[114]

173. The RLC will be $1.19 + GST per passenger. Auckland Airport states that the RLC will be introduced no earlier than July 2020 and only once its Board of Directors have:[115]

    173.1 determined that Auckland Airport has spent more than $50 million associated with the development of the second runway (from the start of the PSE3 onwards); and

    173.2 resolved to proceed with construction of the second runway.

Our views on the runway land charge and its relationship to its second runway assets

174. As noted, we expect Auckland Airport to realise some of the additional $8m of potential returns associated with the assets held for future use over PSE3, prior to these assets entering the RAB upon commissioning of the second runway. Specifically, the airport will begin realising the additional revenue, associated with the higher asset value, upon introducing its RLC, given the RLC is intended to recover the holding costs on land for the second runway.

175. We note that this expectation of an increase in asset value arises due to the airport targeting a return above our mid-point WACC estimate with the precise amount dependent on the level of the RLC. The role of the RLC is to bring the additional revenue, associated with the holding costs of second runway assets, forward in time. The RLC itself, as proposed by Auckland Airport, does not raise concern about the airport earning excessive profits over PSE3.

176. This is discussed in **Attachment B** (Our assessment of forecasts affecting Auckland Airport's returns). **Chapter 4** (pricing efficiency) also considers how the RLC affects the efficiency of Auckland Airport's pricing.

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114 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

115 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

Chapter 3 Investment efficiency: is Auckland Airport investing in assets appropriately, efficiently and at a quality that reflects consumer demands?

Purpose

177. This chapter contains our analysis and conclusions on the extent to which Auckland Airport's capital expenditure forecasts raise any significant concerns about whether the airport is likely to invest appropriately, efficiently and at a quality that reflects consumer demands.

178. This analysis is relevant to the extent to which Auckland Airport has incentives to invest, including in replacement, upgraded, and new assets; and has incentives to improve efficiency and provide services at a quality that reflects consumer demands (sections 52A(1)(a) and (b) of the Act).[116]

179. The timing and value of Auckland Airport's capital expenditure profile affects its expected profitability. Therefore, some of the analysis and conclusions in this chapter directly affect our assessment of the extent to which Auckland Airport's target returns are likely to promote the long-term benefit of consumers.

Conclusions

180. In addition to its planned second runway, Auckland Airport is forecasting to invest $1.8b in aeronautical infrastructure over the PSE3 period. This is significantly higher than historical investment.[117]

181. Based on stakeholder feedback, we consider that there are no significant concerns that Auckland Airport will not invest appropriately over the PSE3 period. In our view, Auckland Airport's capital expenditure forecasts do not raise concerns that it would be expected to extract excessive profits. Accordingly, we have used Auckland Airport's capital expenditure forecasts as a basis for assessing its expected profitability (discussed in **Chapter 2**).

182. Stakeholders have commented favourably on Auckland Airport's approach to consultation and engagement, and the outcomes have generally been acceptable to participants.[118]

183. Auckland Airport's capital expenditure cost estimates do not appear to have been costed inappropriately. Auckland Airport had its Terminal Development Plan (its single largest capital project in the PSE3 period) independently costed and then

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116 We note that section 52A(1)(a) of the Act also includes the incentive to innovate however, as noted in **Chapter 1**, innovation is not a focus area for this review.

117 This $1.8b investment relates to the airport's aeronautical pricing services. Auckland Airport is also investing an additional $100m in its other regulated services.

118 BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 19.

independently peer reviewed. This indicates that Auckland Airport has applied a high level of rigour in the costing of its forecast capital expenditure plans.

184. Our review of Auckland Airport's historic capital expenditure compared to its forecast does not provide evidence of planned under-investment, over-investment, or bias. Nor do we see evidence of a strategy to gain from delaying projects.

185. Planned and actual investment is generally occurring at an appropriate time, with delays and reprioritisations justified on the basis that they were consulted on and received broad agreement by most airlines.

186. Both Auckland Airport and airlines agree that Auckland Airport may experience some ongoing quality concerns over the PSE3 period. It is not unreasonable to expect changes in quality of service during construction, and while new projects are beginning.

187. Nevertheless, it appears that Auckland Airport has considered the level of service quality demanded by consumers when establishing its capital investment plan, and that its investment programme is expected to address a number of quality concerns in the longer term. We would be most concerned about any systematic degradation of quality that remains unaddressed; however we find no evidence of this.

188. We have assessed how sensitive our assessment of Auckland Airport's expected returns are to its capital expenditure forecasts, and found that:

188.1 a 10% increase (or decrease) in Auckland Airport's capital expenditure forecasts decreases (or increases) the airport's expected returns by 1.8 percentage points; and

188.2 if 50% of the 2018 and 2019 capital expenditure is delayed by two years, Auckland Airport's expected returns increases by 0.4 percentage points to 7.5%.

189. Auckland Airport may have been able to mitigate risk and airlines' concerns that actual capital expenditure may differ from forecast levels to a greater extent through the use of a risk allocation adjustment.

190. An airport may have an incentive to delay commissioning of assets until the end of the pricing period. However, Auckland Airport has justified delays to its capital expenditure projects on the basis that project reprioritisations were consulted on and agreed to by airlines. We also note that the profits which Auckland Airport received from spending below forecast in the early years of PSE2 were mitigated by overspends in later years.

191. Lastly, we acknowledge the significant size of these capital expenditure plans, and the likelihood that outcomes will differ from forecasts. As these plans are progressed, we expect the governance and consultation framework in place to provide airlines with reasonable opportunity to monitor Auckland Airport's performance in carrying out its capital expenditure plans and to assess proposed

changes to these plans. We also have the ability in future to comment on Auckland Airport's performance, including on differences between its forecast and actual investment.

Our approach to assessing Auckland Airport's capital expenditure forecasts

192. We assessed whether there are any significant concerns that Auckland Airport's capital expenditure forecasts for the PSE3 period do not provide for investment that is appropriate, efficient, and at a quality that reflects consumer demands.

193. We assessed this by considering:

193.1 the reasonableness of Auckland Airport's capital expenditure consultation and whether the outcomes of that consultation process have been generally supported by stakeholders (ie, whether there is consensus that the Airport is investing in the right assets);

193.2 whether planned investments are expected to occur at an appropriate time (ie, whether the Airport is investing at the right time);

193.3 whether the Airport is expected to provide services at a quality that reflects consumer demands including whether:

193.3.1 Auckland Airport's capital expenditure plan is likely to address past or current service quality issues; and

193.3.2 Auckland Airport is investing in assets that are likely to provide services at the quality that consumers want in the future.

193.4 whether the investment plan has been costed inappropriately;

193.5 whether there are concerns that the forecasts are not an appropriate starting point for assessing profitability (ie, evidence of any planned under-investment or over-investment); and

193.6 if Auckland Airport has not adequately mitigated any risks relating to actual outcomes differing from its capital expenditure forecasts.

Information used to assess Auckland Airport's capital expenditure forecasts

194. Our analysis of Auckland Airport's capital expenditure relies to a large extent on:

194.1 submissions received as part of this review of the PSE3 disclosure; and

194.2 analysis of Auckland Airport's actual capital expenditure expenditure over the PSE2 period against its forecasts for that period.[119]

[119] This compares to our section 56G review, where we did not have actual investment information for PSE2 and therefore could not conclude whether information disclosure regulation under Part 4 of the Act was effectively promoting efficient investment at Auckland Airport. We now have actual investment

195. Consistent with section 4C of the AAA, Auckland Airport consulted major airlines on its capital expenditure plans. This encourages Auckland Airport to provide services at the quality that consumers demand but does not prevent the airport setting charges as it sees fit. We have considered the robustness of this consultation process.

196. Under information disclosure regulation, airports are required to provide:

196.1 ten year forecasts of its capital expenditure at each price setting event; and

196.2 actual capital expenditure compared to forecast capital expenditure annually.

197. We have not undertaken a detailed review of Auckland Airport's capital expenditure forecasts and supporting business cases because we do not receive this information in detail, and there have not been significant concerns raised by stakeholders about Auckland Airport's costings to justify us requesting it.

Analysis of Auckland Airport's capital expenditure plans for PSE3

198. Auckland Airport is intending to invest significantly in its infrastructure over the PSE3 period. It is forecasting to invest in aeronautical infrastructure at approximately five times the level of historical investment.

199. Auckland Airport has indicated it has experienced a material change in conditions over the past two years as growth has outstripped projections. It stated that a step change in investment is required to ensure that it is able to provide sufficient capacity and quality services now and in the future.[120]

200. Much of this forecast investment relates to improvements to Auckland Airport's international and domestic terminals, with a relatively small percentage (11%) of forecast investment in priced assets set aside for the second runway infrastructure over the PSE3 period (subject to certain triggers being met).

201. Auckland Airport is proposing a new domestic jet terminal and changes to the existing international terminal to provide additional gates and improve the passenger journey throughout the terminal. Auckland Airport is also planning improvements to its taxiways and is investing in new technologies.

Auckland Airport's consultation process appears reasonable and the outcomes of the process were generally supported by stakeholders

202. Auckland Airport has consulted with its major customers over FY2017 on its capital plan and on prices.

203. Auckland Airport's approach to consultation and engagement is generally viewed favourably by stakeholders, who have noted that:

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information for PSE2 and can compare this against PSE2 forecasts to draw inferences about potential risks to the delivery of planned PSE3 investments.

120 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 61.

203.1 its consultation on capital expenditure projects is probably the best of any airport in New Zealand;[121]

203.2 it is willing to work with airlines and agencies to deliver quality improvements, including the development of meaningful Service Level Agreements (SLAs);[122] and

203.3 it is willing to discuss offering different prices to individual airlines that are interested in receiving a different level of service.[123]

204. The outcomes from Auckland Airport's consultation and engagement also appear to be generally acceptable to stakeholders, for example:

204.1 Air New Zealand stated that it supported the investment pathway;[124] and

204.2 BARNZ noted that the projects in the capital expenditure plan are generally supported by airlines and considered to be necessary to meet demand at the airport.[125]

205. We note that ongoing consultation will be required by Auckland Airport to refine forecasts and agree specific investment outcomes. We also note the scope for further improvements around quantification of project benefits and service level offerings.

206. Our assessment in this section takes account of stakeholders' views of the consultation process, which we discuss in more detail below.

Auckland Airport's views on the capital expenditure consultation process

207. Auckland Airport notes that the capital investment consultation model, which has been in place for some time, has worked constructively to support its PSE3 capital expenditure forecast. It considers that there was meaningful engagement with airlines on its capital expenditure forecasts, and airline feedback has had a material impact on final outcomes.[126]

208. Auckland Airport states it was responsive to airline requirements and changing market conditions throughout the PSE2 period. It states that all major changes to the capital plan set out in pricing for PSE2 were consulted on with its major airline

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121 BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 19.

122 BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), Table 3 Row 14.

123 BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 5.

124 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 32 and 59.

125 BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), pages 18-19.

126 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 24.

customers and BARNZ, and airlines supported the repurposed capital expenditure programme.[127]

209. Auckland Airport notes that it established a purpose-built consultation forum and considers this demonstrates its commitment to responsible and robust capital planning, heavily informed by airline feedback. It also notes that the actions it has taken to develop a governance and consultation framework for this step-up in capital expenditure throughout the PSE3 period will allow airlines to monitor Auckland Airport's performance against the capital plan and robustly understand proposed variations in projects, timing, and costs.[128]

210. Auckland Airport has submitted that BARNZ has acknowledged the governance and consultation framework, which BARNZ and other airlines are participating in, is suitable for upcoming capital projects.[129]

211. Auckland Airport states that it has continued to engage with airlines on the next stage of design and delivery of the capital plan since the end of the pricing consultation process. Auckland Airport suggests that there may be an increase in airline requirements compared to the assumptions that underpin the base case capital expenditure forecast.[130]

Airlines' views on the capital expenditure consultation process

212. As noted above, BARNZ and Air New Zealand generally support Auckland Airport's approach to consultation and engagement, and are broadly supportive of the airport's investment programme.

213. Qantas raised some concern about the level of forecast investment, stating that there are still significant questions over the quantum, staging and deliverability of several projects.[131]

214. Airlines have identified some areas that could be improved. For example, BARNZ notes that:

> "Airlines that operate at Auckland Airport have a range of business preferences (eg some are low-cost services and some provide a more premium service). Some airlines may be happy to receive a lower quality of service in some areas if their charges were lower. Others may be willing to pay more for a better service. The Airport does not provide a standard charge offering of this nature (ie it does not offer a menu of standard charges based on different service offerings). However, although BARNZ has no involvement in such discussions, we

127 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper – Appendix A" (19 December 2017), page 7.

128 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 25.

129 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 25.

130 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 26.

131 Qantas "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), pages 1-2.

understand the Airport is willing to discuss offering different prices to individual airlines that are interested in receiving a different level of service."[132]

215. BARNZ also notes that information provided during the consultation process indicated the general improvements that were expected from each project, but did not quantify the benefits.[133]

Planned investment is generally occurring at an appropriate time

216. As discussed in the previous section, airlines generally support Auckland Airport's capital expenditure plan.[134] However, some concerns have been raised about investment occurring too late. This is discussed below.

Stakeholders' views on whether planned investment is occurring at an appropriate time

217. Air New Zealand considers that consultation on the Terminal Development Plan has been underway for longer than indicated by Auckland Airport. It notes that at the commencement of PSE2, Air New Zealand was involved in consultation with Auckland Airport on the best location of the new domestic terminal. At the time, Air New Zealand commissioned Intervista Consulting, who completed concept planning for the alternative Southern Terminal Option, and delivered this work to Auckland Airport in March 2012.[135]

218. Air New Zealand also notes that the capital expenditure projections to deliver the Southern Terminal Option remain high-level cost estimates. It suggests that in the intervening seven years from 2011 to 2017, little progress has been made on the integrated terminal. Air New Zealand considers that this has been to the clear dis-benefit of consumers and to the clear benefit of Auckland Airport shareholders.[136]

219. In its submission on our draft report, Air New Zealand reiterated that while it welcomes the planned $1.8b investment, it considers that this investment has generally occurred well behind growth, to the benefit of shareholders.[137]

220. BARNZ considers that some investment is happening too late. It notes that, for example, Auckland Airport is building a new biosecurity area which will provide more capacity but is not expected to be ready until 2020. BARNZ suggests the area already

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132 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 5.

133 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 2 row 11.

134 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 32 and 59. BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 18–19.

135 Air New Zealand "Cross-submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (19 December 2017), paragraph 33.

136 Air New Zealand "Cross-submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (19 December 2017), paragraph 34.

137 Air New Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), page 3.

has insufficient capacity at peak times and is the current primary constraint at the international terminal.[138]

221. BARNZ considers that passenger demand, reputation and customer pressure are the key factors pushing Auckland Airport to invest in necessary infrastructure at the airport. It also notes that as it seems that some investment is being undertaken too late, it questions whether the information disclosure regime is sufficiently promoting efficient capital investment incentives.[139]

222. Auckland Airport suggests that airlines were broadly comfortable with its forecast capital investment for PSE2 at the time it set prices. It states that it reduced its proposed capital expenditure in response to certain airlines' requests but then went ahead with the originally planned investment (even though it had not priced to recover this) due to higher than forecast demand growth.[140]

Our response

223. Overall, we do not consider that the planned timing of Auckland Airport's investment for the PSE3 period is inappropriate.

224. As part of its PSE3 expenditure forecasts, Auckland Airport is proposing a new domestic jet terminal and making improvements to the existing international terminal in order to provide additional gates and to improve the passenger journey throughout the terminal.

225. While airlines are concerned that this investment is occurring too late, at the time of setting prices for PSE2, we concluded that Auckland Airport's decision to exclude any capital expenditure in the new domestic jet terminal from PSE2 pricing was reasonable and appeared to be in response to airlines' concerns.[141]

226. We note that when setting prices for the PSE2 period, Auckland Airport indicated that:

    226.1 it still expected to commission this project during the PSE2 period; and

    226.2 it would recover any associated costs incurred during the PSE2 period as a separate investment charge, which would be determined following consultation with stakeholders.

227. Airports generally set prices every five years. If Auckland Airport had wished to introduce additional capital expenditure charges earlier than originally forecast it

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138 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 18 - 19.

139 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 23.

140 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 20.

141 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013) paragraph H3 and H22.

would have needed to re-consult on prices and this would have caused prices over the period to increase. Auckland Airport did not undertake the investment in the new domestic jet terminal as part of PSE2 nor did it introduce additional charges in relation to this project.

228. We note that airlines have identified other investment that could have occurred earlier to respond to capacity constraints. Nonetheless, Auckland Airport did adapt its investment plans over the PSE2 period to respond to increased demand and following consultation with airlines.

No significant concerns that Auckland Airport will be unable to provide services at a quality that reflects consumer demands

Is Auckland Airport's capital expenditure plan likely to address past or current quality issues?

229. Both Auckland Airport and airlines agree that Auckland Airport may experience some ongoing quality concerns over the PSE3 period. In particular, Air New Zealand has recently advised Auckland Airport that its current plans for the integrated terminal are insufficient to withstand expected tourism growth and transit throughput.[142] We expect Auckland Airport to work closely with airlines on an ongoing basis as it refines its capital expenditure plans over the PSE3 period.

230. However, there does not appear cause for significant concern around long-term quality at Auckland Airport once its capital plan for PSE3 (in particular, the domestic jet terminal) is completed given that:

230.1 Auckland Airport's customer survey results are still reasonable and largely consistent with other airports;

230.2 it appears that Auckland Airport's investment programme will address a number of the quality concerns raised by airlines in the longer term; and

230.3 it is reasonable to expect changes in quality during construction, and while new projects are coming online.

Is Auckland Airport investing in assets that will provide services at the quality which stakeholders and consumers want in the future?

231. Auckland Airport appears to have considered the level of service quality demanded by consumers when establishing its capital investment plan and has tried to weigh the different quality demands of different airlines. In general, it would be expected that the Airport's significant investment plan will improve quality outcomes for consumers.

232. Our assessments in these sections regarding service quality are based on stakeholders' views, which we discuss in more detail below.

[142] Air New Zealand "Cross-submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (26 June 2018), paragraph 14.

Auckland Airport's views on whether its capital expenditure plan is likely to address past or current quality issues

233. Auckland Airport states that it recognises that service performance will be a key focus for PSE3, and that it remains committed to providing quality services to its customers.[143]

234. Auckland Airport states that it reports regularly to its Board on the service quality metrics in information disclosure, conscious that it is accountable for reporting these publically, and that those service quality metrics were established by the Commission following consultation with airlines. Auckland Airport notes its annual disclosures over the PSE2 period show a number of positive quality outcomes.

    234.1 Service reliability remains high at Auckland Airport, with a high availability of core services (available 99.9% - 100% of the time) and a corresponding low number and duration of outages–even though the traffic handled at Auckland Airport has "grown exponentially" over the PSE2 period.[144]

    234.2 There was strong passenger satisfaction over PSE2, with scores ranking between "Good" and "Very Good". Quality experienced by passengers at Auckland Airport in PSE2 is broadly comparable with Wellington Airport, although lower than Christchurch Airport (to be expected given the new terminal infrastructure at Christchurch Airport).[145]

235. Auckland Airport states that it remains committed to working alongside airlines and other key stakeholders over PSE3 to develop a set of service measures that all parties value, and to formalise the process for notification and rectification of service level matters. It also notes that it wants to make sure that it is measuring and sharing meaningful data, is responsive to airline concerns about service quality, and that there are key processes for airlines to bring issues to its attention and for it to lead the resolution of those issues.[146]

Airlines' views on whether Auckland Airport's capital expenditure plan is likely to address past or current quality issues

236. BARNZ notes that the airport has experienced service quality issues recently due to growth, which may have been avoidable. It states that there are significant capacity problems at the airport, which are particularly acute during the summer peak–these

143 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), pages 29-30.

144 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 1.

145 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 1.

146 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 2.

problems have been driven by investment that has not kept pace with the levels of passenger growth.[147]

237. BARNZ considers that the airport is 'playing catch-up' in terms of meeting demand. It expects a poor customer experience during most, if not all, of PSE3.[148]

238. BARNZ states that in the past 12 months airlines have reported issues with the reliability of the baggage handling system, which has had increased outages due, in part, to the effect of the Airport capital works. BARNZ notes that the Airport has taken steps to resolve these issues, although leaks in some areas are still being experienced. Based on anecdotal information from airlines, when FY2017 figures are available, BARNZ expects they will show an increase in baggage system interruptions and the number of bussed flights relative to FY2016.[149]

239. Auckland Airport responded to BARNZ's view by acknowledging that the speed of growth has created some pressure points, and that there is some congestion experienced at peak times of the year.[150] Auckland Airport also notes more generally, that if conditions change rapidly, this can create periods where congestion is experienced before new capacity comes on-stream (given the long lead times involved in designing and constructing airport infrastructure). It states that it had no cause to accelerate the investment programme in 2014, and does not believe its customers were ready to support this at that time either.[151]

240. Auckland Airport also noted that at the beginning of the pricing consultation it sought to understand airlines' service quality priorities, and took steps to resolve issues raised by airlines (for example, BARNZ noted that it took steps to resolve baggage system reliability issues).[152]

241. In line with Auckland Airport's statements, BARNZ also considers the Airport's customer survey scores are reasonable.[153] BARNZ considers that generally Auckland Airport is willing to respond to customer concerns and help them deliver better services. For example, BARNZ noted that the airport has brought forward contact gate investment, investing in aircraft boarding ramps and better-quality busses, in

147 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 3 row 14.

148 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 2 row 11.

149 BARNZ also notes that two key performance metrics presented to the Auckland Airport Collaborative Operations Group (COG) relate to the percentage of international departing and arriving passengers to be processed within specified timeframes. These KPIs are consistently not met and performance is generally not improving. However, the Airport appears open to refreshing the COG to improve its effectiveness in promoting quality improvements.

150 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 19h.

151 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 19d.

152 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 2.

153 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 3 row 14.

response to airline concerns about bussing products. It also noted that the Airport has introduced ground power at international gates and stands, which assists aircraft efficiency.[154]

242. In response to our draft report, Air New Zealand submitted that as at mid-2018, facilities at the airport are congested on tarmac, in the terminal and across the airport campus as a whole. Air New Zealand states it has advised Auckland Airport that its current plans for the integrated terminal are insufficient to withstand expected tourism growth and transit throughput.[155]

Auckland Airport's views on whether it is investing in assets that will provide services at the quality which stakeholders and consumers want in the future

243. Auckland Airport suggests that the consumer benefits that will be delivered by the investment plan are substantial. It notes that the investment plan is intended to provide better and faster passenger journeys to the airport and airport terminals, and a good quality of service to its passengers and airlines.[156]

244. Auckland Airport states that as part of its pricing decision for PSE3, it has committed to building on its existing constructive and collaborative approach to service performance by establishing a working group on service levels. It notes the aim of this working group is for the airport, airlines and key stakeholders to work together to develop a set of service measures that all parties value, and to formalise the process for notification and rectification of service level matters.[157]

245. In some cases, there is divergence between the service levels that are desired by different airline customers. In these circumstances, Auckland Airport says it has sought to balance airline feedback where possible.[158]

246. Auckland Airport considers that the base case capital plan for PSE3 represents a service standard for common-use assets, which was informed by airline feedback and industry and International Air Transport Association (IATA) planning standards. Auckland Airport has indicated it remains open to customer requests for different quality standards for individual services or at peak, to the extent those customers value the differential service and are prepared to pay for it.[159]

247. Auckland Airport states that it has been conscious of the significant step change in capital expenditure relative to previous pricing periods and has, over the pricing and

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154 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 2.

155 Air New Zealand "Cross-submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (26 June 2018), paragraph 14.

156 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 24.

157 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 29 – 30.

158 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 24.

159 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 2.

capital consultation processes, tested the trade-offs that may be available to reduce or delay capital expenditure. It also notes the base case plan represents Auckland Airport's best view of the capital expenditure required to support common-use activities over the next five years, and its best estimates relating to project delivery as at the date of its final pricing decision.[160]

Airlines' views on whether Auckland Airport is investing in assets that will provide services at the quality which stakeholders and consumers want in the future

248. BARNZ considers that the forecast investment may be sufficient to meet expected demand and desired service quality in future pricing periods. However, BARNZ also suggests that while Auckland Airport's investment is substantial, it is difficult at this stage to make a proper assessment of whether expected demand and service quality will be met, as many projects in the capital expenditure plan for PSE3 are in the early stages of planning.[161]

Auckland Airport's capital expenditure estimates do not appear to have been inappropriately costed

249. Auckland Airport commissioned an expert quantity surveyor, Beca, to generate its cost estimates for the Terminal Development Plan. These cost estimates were independently peer reviewed by the engineering consultancy AECOM.[162]

250. This indicates Auckland Airport has applied a high level of rigour in the costing of its forecast capital expenditure plans.

251. On this basis we have used the airport's capital expenditure forecasts as an input to our profitability analysis (discussed in **Chapter 2**).

252. We have assessed how sensitive our assessment of Auckland Airport's expected returns are to its capital expenditure forecasts. We have found that increasing the capital expenditure forecast by 10% would result in an expected return of 5.3% (a 1.8 percentage point decrease from our assessment of Auckland Airport's target return of 7.1%). Decreasing the capital expenditure forecast by 10% would result in an expected return of 8.9% (a 1.8 percentage point increase from our assessment of Auckland Airport's target return of 7.1%).

253. Contrary to BARNZ's suggestion, we do not find evidence from the transcript of Auckland Airport's Investor Day that suggests its capital expenditure forecasts have been set at the upper end of the potential range rather than the mid-point.[163]

254. We do agree with BARNZ however, that spending on 'other capital' was significant over the PSE2 period. Auckland Airport spent $158m against a forecast $88m. Given

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160 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 2.

161 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 2 row 11.

162 The terminal development plan is the single largest capital project for PSE3.

163 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper - appendix B" (19 December 2017).

that this category is approximately 30% of total capital expenditure, we consider there could be better explanations for the $70m overspend in the PSE2 pricing disclosures.

255. It is encouraging to hear that for PSE3, Auckland Airport has sought to improve its ability to track projects (which can be bundled in a way that differs from what was expected) through the design process to the forecast.[164] We note in Auckland Airport's PSE3 forecast 'other capital' is forecast to fall below 1%, which suggests a high degree of confidence that the vast majority of capital expenditure requirements for PSE3 will be met through forecast key capital projects.

256. Our assessment in this section takes account of stakeholders' views, which we discuss in more detail below.

Stakeholders' views on the capital expenditure cost estimates

257. Auckland Airport notes that through the extensive process of developing the central base case, the capital expenditure cost estimates were rigorously tested internally and informed by airline feedback throughout, with some airlines involving a quantity surveyor. Auckland Airport also notes that it had the cost estimates for the Terminal Development Plan generated by BECA, and then independently peer reviewed by AECOM.[165]

258. Air New Zealand has indicated that information on the projects in PSE3 remains at a very high level, and are lacking in sufficient detail for customers to be able to assess whether the projects are costed accurately, or can be delivered in the timeframes indicated.[166]

259. BARNZ has raised concerns that some of the forecast costs seem very large and it is not certain of the airport's ability to spend the full amount as forecast. Further, it could not say for certain whether projects could be delivered at a lower cost. BARNZ subsequently noted that these concerns increased, in response to Forsyth Barr's report of Auckland Airport's Investor Day, which noted that the capital expenditure forecasts seem to have been set at the upper end of the potential range rather than the mid-point.[167]

260. Auckland Airport responded to BARNZ's submission, indicating that it considered the reporting by Forsyth Barr on its investor day to be inaccurate. In particular, Auckland Airport noted that:

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164 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A, page 1.

165 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 7.

166 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 33 and 62.

167 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 19.

260.1 its audio recording of the investor day discussion shows that Auckland Airport reinforced its commitment to the PSE3 plan to investors, but also recognised that it needs to manage infrastructure investment responsibly – which may include changes to the plan if it is faced with material changes in market conditions (such as a significant global event similar to the global financial crisis);

260.2 the five-year plan was relatively certain, although it also referenced the well-established regulatory principle that airports should try to find opportunities to optimise their capital expenditure programmes while still delivering the same outcomes and same service levels; and

260.3 its investment plan and pricing decision to the market is an ongoing education process, and aspects of the detail can be difficult to understand. It stated that it will continue to take steps to ensure that investors and analysts understand its approach and had written to Forsyth Barr to ask for a correction of their report.[168]

261. BARNZ also noted that in PSE2 there was a very large amount of expenditure on 'other capital expenditure' and non-forecast projects that were greater than forecast (Auckland Airport spent $158m against a forecast $88m). BARNZ notes that in part, this will reflect the difficulty in forecasting capital expenditure requirements for five-year periods in a changing commercial environment, and that it supports changes to the capital plan when circumstances necessitate this. However, BARNZ is concerned that the airport's capital expenditure can vary so much from the forecasts used to set prices.[169]

262. Auckland Airport responded to this, acknowledging that spending on 'other capital' was significant over PSE2. It suggests this was (at least in part) due to projects being more tightly defined than was necessary. It states that for example, it had specified particular locations for stands, when in practice the locational options for delivering stands can be "subject of discussion" during the pricing period. It also notes that a material amount of project spend was repurposed.[170]

263. Auckland Airport states that for PSE3 it has spent considerable time reviewing the programme taxonomy, seeking to improve its ability to track projects (which can be bundled in ways that differs from what was expected). It acknowledges that in practice, it is still possible that project sub-elements may be bundled differently than was anticipated when prices were set.[171]

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168 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 25-26.

169 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 21-22.

170 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A, page 1.

171 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A, page 1.

We do not find evidence of planned under-investment or over-investment, or intentional delaying of projects

The airport may have an incentive to overstate its capital expenditure forecast

264. We recognise that there may be incentives for airports to overstate capital expenditure if airports expect that they are able to benefit from any underspend that actually occurs. In addition, given prices are set in advance for the full PSE period (based on forecast commissioned assets), any efficiency gains and losses may be rewarded differently depending on the year in which assets are commissioned. This time inconsistency can create incentives for airports to delay efficiency improvements.

265. The incentive for airports to delay efficiency improvements under information disclosure regulation may be weaker than under price-quality regulation. This is because airports can set prices as they see fit and can opt to reset prices earlier than every five years so long as they consult with major customers.

We consider that given the size of the investment programme, there is a significant risk that expenditure could exceed forecasts

266. In total, Auckland Airport spent $232m, or 80%, more than forecast over the PSE2 period (FY2013-FY2017). This overspend was concentrated in FY2017. Capital expenditure was below forecast in FY2013 and FY2014 but above forecast in FY2015 – FY2017.

267. While there is a risk that Auckland Airport has an incentive to underspend compared to forecast, we consider that given the size of the investment programme, there is also a significant risk that expenditure could exceed forecasts.

268. Stakeholders have raised concerns of underinvestment and projects being delayed to the benefit of the airport. This is discussed below, followed by Auckland Airport's response and our overall view.

Stakeholders' views relating to planned under-investment or over-investment, or delaying of projects

269. Air New Zealand noted that over the PSE2 period, Auckland Airport has returned more in dividends to shareholders than it has spent on aeronautical capital expenditure. It states that Auckland Airport's special dividend of $454M paid to shareholders in 2014 (on the pretext of being assessed as 'cash positive' by credit agencies) would have made a significant contribution to the required aeronautical infrastructure investments, but the regulatory regime allowed for the shareholders to benefit instead. Air New Zealand suggests that a good steward of monopoly infrastructure would have anticipated required investment at that time and invested at least a portion of those excess earnings in infrastructure.[172]

[172] Air New Zealand "Cross-submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (19 December 2017), paragraph 43. Air New

270. Air New Zealand submitted that Auckland Airport's elevated capital expenditure programme in PSE3 gives the airport more opportunity to under-deliver that capital expenditure and for shareholders to continue to benefit. It has suggested that investment is likely to occur late in PSE3, and stated that "this pattern of spending provides cash flow benefits to the regulated monopoly from its captive customers".[173] Air New Zealand specifically notes its concern that the building of the new terminal will not commence according to published timelines, resulting in higher prices for building materials and new requirements added.[174]

271. Air New Zealand is also concerned that the investment plans do not require contribution from shareholders, who it states will continue to receive 100% of the airport's net profit after tax as dividend.[175]

272. BARNZ noted that historically, in most projects it seems that the amount budgeted was ultimately underspent or not spent at all, so the actual by-project forecasting seems to include too much capital expenditure.[176]

273. BARNZ noted that Auckland Airport's forecast commissioned asset values of $236m over FY2013-FY2016 compares to its actual commissioned asset values over these years of $228m. BARNZ suggested that while it appears that Auckland Airport only slightly underspent, the pattern of asset commissioning provides a different view, with underspend in the first years of the period and significant overspend in the final year.[177]

274. Additionally, BARNZ suggested that Auckland Airport delayed building and commissioning assets until the end of the pricing period and then commissioned them, but still earned the benefit of the forecast return on capital expenditure based on the forecast commissioning dates – BARNZ notes that this is a profit maximising strategy under the pricing framework.[178]

275. BARNZ noted that Auckland Airport had to spend more in FY2016 due to rapid passenger growth, but that this does not explain why the commissioned asset values were so much lower than forecast in FY2013-FY2015. BARNZ suggests that in itself, this is not evidence of planned under- or over-investment, but that it does raise questions as to whether the airport sought to maximise profits by deferring

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Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), page 3.

173 Air New Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), page 3.

174 Air New Zealand "Cross-submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (26 June 2018), paragraph 15.

175 Air New Zealand "Cross-submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (26 June 2018), paragraph 43.

176 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 2 row 7.

177 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 20-21.

178 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 2 row 7.

investment until later in the pricing period, which would be consistent with the incentives faced by Auckland Airport in the pricing framework.[179]

276. BARNZ provided a review of the 23 projects listed in Auckland Airport's PSE2 Schedule 18 disclosure. It submitted the following.[180]

276.1 Four projects have had zero capital expenditure spent on them in FY2013-FY2016 when, in total, they were supposed to have $30.7m spent on them in those four years. These four projects all seem similar to projects that are now included in the PSE3 capital expenditure plan.

276.2 There was a very large (>30%) underspend in five projects: check-in, stand 1, stand 2, Pier B, Taxiway Lima.

276.3 There was a greater than 30% overspend in one project: asphalt apron replacement.

276.4 Nine projects have had zero capital expenditure spent on them in FY2013-FY2016. The airport's project forecast extends for ten years, so these projects had forecast capital expenditure in or after FY2017.

276.5 There has been substantial un-forecast expenditure on projects not included in the PSE2 capital expenditure plan, totalling $69m in FY2015 and FY2016.

276.6 'Other capital expenditure' was forecast to be $71m over FY2013-FY2016, but was actually $114m over those years.

277. In addition, BARNZ noted that in PSE2 the airport underspent against forecasts in particular projects, but then spent more on projects that were not forecast at the time prices were set.[181]

278. In response to BARNZ and Air New Zealand's views, Auckland Airport considered the primary driver of the difference between actual and forecast investment in the early years of PSE2 stemmed from a customer request to change the planned location of the future domestic processor.[182]

279. Auckland Airport rejected suggestions from airlines that it under-invested in aeronautical infrastructure in order to increase dividend payments to investors, including the $454m capital return. Auckland Airport noted that:

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179 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 20–21.

180 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 21–22.

181 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), table 2 row 7.

182 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 26.

279.1 it invested $230 million more in PSE2 than the forecast, and that during PSE2 consultation, airlines requested that it remove the Pier B expansion from the agreed baseline plan;

279.2 ultimately, once conditions had changed, it agreed to go ahead and build it anyway;

279.3 the capital return was solely to achieve credit rating stability as Auckland Airport was on credit watch positive; and

279.4 had it not taken action, it would have received an unwanted credit rating upgrade that it would not be able to support in the future if/when capital expenditure levels increased materially.[183]

280. Auckland Airport has indicated it seeks to deliver timely investment that is demand-led. However, it acknowledges that forecasts cannot be 100% accurate and it is not always possible to deliver investment perfectly on time, given the long lead times involved in designing and constructing airport infrastructure.

281. Furthermore, Auckland Airport has stated that if conditions change rapidly, this can create periods where congestion is experienced before new capacity comes on-stream, and that this has been the case at Auckland Airport at times in 2016 and 2017. But, it also notes it is a fine balance – if it invests too early, it is faced with accusations of over-investing.

Our response

282. We recognise there may be an incentive for airports to overstate forecast capital expenditure (and in particular the forecast of assets commissioned during the period) if airports expect that they are able to benefit from any underspends that actually occur. In addition, an airport may have an incentive to delay the building and commissioning of assets until the end of a pricing period because they will still earn the forecast return on capital expenditure based on the forecast commissioning dates (which may be earlier).

283. Our review of Auckland Airport's historic capital expenditure compared to forecast does not provide evidence of planned under-investment, or over-investment, or bias.

Table 3.1 Forecast compared to actual capital expenditure over the PSE2 period

(Figures in $000s)	**30/06/2013**	**30/06/2014**	**30/06/2015**	**30/06/2016**	**30/06/2017**
Forecast capital expenditure	65,584	82,773	56,379	36,893	48,120
Actual capital expenditure	50,703	52,947	74,910	110,205	233,112
Difference	-14,881	-29,826	18,531	73,312	184,992
Cumulative difference	-14,881	-44,708	-26,177	47,136	232,127

[183] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 28.

284. Based on the numbers in Table 3.1 above, the profits which Auckland Airport received from spending below forecast in the early years of PSE2 were mitigated by overspends that began in FY2015, and continued to the end of the PSE2 period. This may indicate the possibility of the airport delaying projects to the end of the pricing period.

285. However, we note that delays to Auckland Airport's capital expenditure projects are generally covered in their disclosures and justified on the basis that the delays/reprioritisations were consulted on and received broad agreement by most airlines.

286. Further, we note the expenditure exceeding forecasts from 2015 onwards is also driven by projects that were not forecast at the time prices were set, and understand that airlines were closely engaged in the development and approval of these un-forecast projects.

287. We disagree with BARNZ's suggestion that in most projects the amount budgeted was ultimately underspent or not spent at all. This is because:

287.1 the key capital projects for PSE2 that were forecast and begun in PSE2 actually had a net overspend;

287.2 where projects did not have any money spent on them, Auckland Airport's annual disclosures suggest that it was generally because it had been decided that those projects would be reprioritised or addressed through another project, following consultation and agreement from airlines; and

287.3 overall across PSE2, Auckland Airport spent $522m against a $290m forecast over PSE2, meaning it invested $232 million more than forecast.

288. We do not have significant concerns that the airport under-invested in capital expenditure in PSE2 in order to increase dividend payments. We comment on the airport's financing decisions in **Attachment A**.

289. We have tested the impact of a change in timing of Auckland Airport's capital expenditure forecasts by assuming 50% of 2018 and 2019 capital expenditure is delayed by two years. This scenario results in an expected return of 7.5%, which is a 0.4 percentage point increase from our assessment of Auckland Airport's target return of 7.1%.

290. Lastly, we acknowledge the significant size of these capital expenditure plans, and likelihood that outcomes will differ to forecasts. As these plans are progressed, we expect the governance and consultation framework in place to provide airlines with reasonable opportunity to monitor Auckland Airport's performance in carrying out its capital expenditure plans and to assess proposed changes to these plans.

291. We have the ability in future to comment on Auckland Airport's historical performance, including any concerns we have that differences between forecast and

actual investment indicate planned under-investment or over-investment, or intentional delaying of projects.

A risk allocation adjustment could have helped mitigate risk and airlines' concerns that actual capital expenditure may differ from forecast levels

292. Overall, we consider that the use of a risk allocation adjustment could have provided for a better allocation of risk between the airport and the airlines. Nonetheless, in this instance, the absence of a risk allocation adjustment is not a significant concern affecting our assessment of Auckland Airport's profitability.

293. We consider that, unless doing so would be inconsistent with the purpose of Part 4 of the Act, risks should be allocated to suppliers or consumers depending on who is best placed to manage them, consistent with how risks tend to be allocated in workably competitive markets. In particular, if suppliers are not compensated for risks that are outside their control, then this might have detrimental incentives on investment.[184]

294. We note that actual capital expenditure may differ from forecast levels for several reasons, including:

294.1 the forecast was reasonable, but the airport failed to deliver the projects on time/within budget (for example due to inefficiencies);

294.2 the forecast was reasonable, but actual expenditure was lower due to efficiency gains;

294.3 the forecast was deliberately set above the efficient level, so that the airport would profit from outperforming the forecast without necessarily being efficient; and

294.4 the forecast was inaccurate due to the inherent uncertainty regarding key inputs.

295. We consider that achieving an appropriate allocation of risk between the parties cannot necessarily be realised through applying a simple wash-up, as proposed by some airlines. This is because there are different types of risk associated with the forecasting and delivery of Auckland Airport's PSE3 capital expenditure, and this has implications around which party is best placed to manage the risks. Relevant types of risk are included below.

295.1 **Delivery risk** - because Auckland Airport is best placed to manage delivery on time, it is more appropriate for Auckland Airport to bear some of the consequences of its non-delivery of outputs where these investments are still needed and where deferral is not efficient. In this instance a related wash-up resulting in lower future prices for airlines might be appropriate.

[184] Commerce Commission "Input methodologies review decisions – Framework for the IM review" (20 December 2016), paragraph 124.

295.2 **Unit cost risk** - because Auckland Airport is best placed to manage delivery within budget, it is appropriate for Auckland Airport to receive some reward (or penalty) if unit costs are lower (or higher) than unbiased forecasts (ie, which occurs if any differences in unit costs are not passed through to prices during the PSE3 period). Doing so provides capital expenditure efficiency incentives for Auckland Airport, and the benefits of any capital expenditure efficiency gains will potentially be shared with airlines at the next PSE, through prices lower than they otherwise would be. In this case, a wash-up is potentially inappropriate as it could remove that incentive.

295.3 **Forecast gaming risk** - it is not appropriate for Auckland Airport to receive rewards solely due to biased (eg, inflated) forecasts. If that were a key concern, then a wash-up might be appropriate.

295.4 **Forecast error risk** - even though there is inherent uncertainty regarding key inputs, Auckland Airport is still better placed than airlines to do the capital expenditure forecasting and to manage the risk of getting the forecast wrong. Again, assuming the forecasts are unbiased, that would suggest that introducing a simple wash-up might remove a desirable incentive.

296. BARNZ proposed that Auckland Airport include a capital expenditure wash-up in its pricing decision to ensure customers only had to pay for assets that were actually commissioned.[185] This proposed asymmetric wash-up appears to be based on the expectation that Auckland Airport's expenditure is likely to be less than forecast and that any underspend will be due to the airport overstating its forecast rather than due to efficiency. Under this proposal, airlines would benefit if the airport underspent its forecasts but would not bear any of the risk if Auckland Airport's cost overran – even for justifiable reasons.

297. Auckland Airport may have been able to mitigate risk and concerns of airlines to a greater extent through the use of a risk allocation adjustment. However, airports are not required to provide risk allocation adjustments, and we have not seen sufficient evidence that the airport has deliberately overstated its forecasts or purposely delayed or not delivered forecast projects. Further, we acknowledge Auckland Airport's concerns that the wash-up proposed by some airlines would reduce its incentives to deliver its capital expenditure projects more efficiently.

298. Alternatively, there may have been other methods for mitigating risks that Auckland Airport could have considered including the use of 'contingent' projects whereby the airport could consult on charges relating to specific projects during the pricing period.[186] Auckland Airport could have also signalled in advance the circumstances that might lead it to bringing forward consultation on new prices (PSE4) should outcomes be significantly different to forecasts.

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185 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 21.

186 Auckland Airport identified the possibility of a similar consultation approach with respect to the domestic terminal upgrade in PSE2.

299. Auckland Airport notes that not having a wash-up would provide the best incentives for it to achieve efficient expenditure and manage risk, and understood that to be the Commission's "default" position.

300. In the IM Review we stated that “ideally, risks should be allocated to suppliers or consumers depending on who is best placed to manage the risk, unless doing so would be inconsistent with s 52A”.[187] We referred to this approach as "default risk allocation". We also noted that in the absence of any specific risk allocation arrangements “the risk that actual out-turns are different from forecasts is assumed wholly by the airport”.[188]

301. Our assessment in this section takes into account stakeholders’ views, which we discuss in more detail below.

Stakeholders’ views on the allocation of risk between the parties

302. Auckland Airport acknowledged that its capital expenditure forecast for PSE3 is a significant step-up from PSE2. It noted that its forecast is driven by the rapid change in market conditions the airport has seen in recent years, which presents both challenges and opportunities for itself, its airline customers and consumers.[189]

303. Auckland Airport also notes that BARNZ presented the major step-up in capital projects as a reason why Auckland Airport should consider a capital expenditure wash-up – that is, it was concerned that there is a greater risk that capital expenditure will be delayed or deferred, and that Auckland Airport “beating” its forecasts in these circumstances would amount to a windfall gain (rather than an efficiency gain in line with the Part 4 purpose).[190]

304. Auckland Airport states that it carefully considered these views during the consultation process, but on balance did not consider that a capital expenditure wash-up was required or would be consistent with encouraging efficient investment delivery over PSE3.[191]

305. Auckland Airport considers it was best placed to control the risk of actual capital expenditure varying from forecast, and to mitigate the costs if that occurs. It considers that a capital expenditure wash-up is not required, or consistent with encouraging efficient investment delivery over PSE3.[192]

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187 Commerce Commission *Input methodologies review decisions – Topic paper 5 – Airports profitability assessment – 20 December 2016* (20 December 2016), paragraph 388.

188 Commerce Commission *Input methodologies review decisions – Topic paper 5 – Airports profitability assessment – 20 December 2016* (20 December 2016), paragraph 390.

189 Auckland Airport “Section 53B review of Auckland Airport’s price setting disclosure for PSE3: cross-submission on process and issues paper” (19 December 2017), page 22.

190 Auckland Airport “Section 53B review of Auckland Airport’s price setting disclosure for PSE3: cross-submission on process and issues paper” (19 December 2017), page 22.

191 Auckland Airport “Section 53B review of Auckland Airport’s price setting disclosure for PSE3: cross-submission on process and issues paper” (19 December 2017), page 22.

192 Auckland Airport “Section 53B review of Auckland Airport’s price setting disclosure for PSE3: response to process and issues paper” (28 November 2017), pages 26-27.

306. Auckland Airport notes that during the pricing consultation process, BARNZ accepted that Auckland Airport was the party best placed to manage the risk of commissioned asset values being higher or lower than forecast.[193]

307. BARNZ disagrees that the airport should bear all of the risk and reward. It noted that where the airport includes the recovery of a return on commissioned asset values in its pricing, but does not commission the assets in question, airport customers bear the risk of paying for assets that are not built (or are built later than forecast).[194]

308. Air New Zealand also submits that it has very real concerns regarding the deliverability of Auckland Airport's capital expenditure programme during PSE3. It noted that these concerns result from:

308.1 the significant step-up required within Auckland Airport itself over historical performance;

308.2 the complexities associated with building in an operating airport environment;

308.3 the significant interdependencies between projects required to stage the construction; and

308.4 the current market for construction services in New Zealand.[195]

309. Similarly, Qantas indicates that there are still significant questions over the quantum, staging and deliverability of several projects. For these reasons, Qantas states that it would support the Commerce Commission investigating the viability of a capital expenditure 'wash-up'-type mechanism to ensure the risk of Auckland Airport not delivering projects within PSE3 does not sit solely with airlines.[196]

310. Qantas also notes that delays or overestimations in capital plans are effectively pre-funding and subsidising future users while guaranteeing a WACC return without risk to the airport. It noted that a delay in the capital plan can mean that depreciation and return is paid on undelivered capital expenditure during the current period, and again in the next pricing period once the capital is delivered.[197]

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193 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 23.

194 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 21.

195 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 64.

196 Qantas "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), pages 1-2.

197 Qantas "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), pages 1-2.

311. NZAA argues that there should be no expectation or assumption that the size of a capital expenditure programme requires risk allocation adjustments.[198]

312. Auckland Airport states that it is unconvinced that an asymmetric wash-up on one variable in isolation was reasonable. In particular, Auckland Airport did not think it was appropriate to introduce a wash-up mechanism without also taking steps to preserve the incentive for Auckland Airport to invest efficiently throughout the pricing period, and to preserve the ability for Auckland Airport to efficiently delay or repurpose capital expenditure and/or efficiently substitute between capital expenditure and operating expenditure.[199]

313. Auckland Airport considers that not having a wash-up would provide the best incentives for it to achieve efficient expenditure and manage risk, and understood that to be the Commission's "default" position also, and was not convinced that the quantum of capital expenditure for PSE3 provides sufficient reason to disrupt those incentives.[200]

314. Auckland Airport considers that the capital expenditure that had the most uncertainty and which would impact prices for PSE3 was a relatively small proportion of its overall capital expenditure programme, and variations to the scope or timing of this part of the capital plan were not likely to have a material impact on overall revenues received from consumers over the PSE3 period.[201]

315. Auckland Airport notes that capital expenditure may be lower than forecast in a pricing period because it made efficient trade-offs between operating and capital expenditure, or because demand has been lower than expected and it has responded appropriately by slowing the capital expenditure programme. Auckland Airport argued that in these circumstances, the better question for interested parties is the overall efficiency of Auckland Airport's total expenditure, and whether Auckland Airport has incentives to find the overall lowest cost way to provide services over the long-term.[202]

316. Auckland Airport considers that it is important and efficient for it to retain flexibility in how and when it invests to solve capacity and other operational challenges. In addition, Auckland Airport noted that robust consultation that supports the delivery of the right investment in an efficient and timely manner is important.[203]

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198 NZ Airports Association "Cross submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (12 December 2017), paragraph 58.

199 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 23.

200 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 23.

201 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 22.

202 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 23.

203 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 26.

317. In this context, Auckland Airport also notes it is cautious about introducing a wash-up mechanism that may provide incentives for some airlines to use ongoing consultation on capital expenditure as a mechanism to stall investments in order to invoke the wash-up process.[204]

318. Finally, Auckland Airport notes that:

318.1 Air New Zealand did not request a wash-up on capital expenditure at any stage during the pricing consultation process, and did not comment on or express any views in support of BARNZ's request for a capital expenditure wash-up; and

318.2 although BARNZ considered a wash-up was appropriate, this was not a key issue that it raised with Auckland Airport's Board sub-committee.[205]

[204] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), pages 23-24.

[205] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), pages 22-24.

Chapter 4 Pricing efficiency: are the prices set by Auckland Airport likely to promote efficiency?

Purpose

319. This chapter contains our analysis and conclusions on the extent to which Auckland Airport's pricing methodology is likely to result in prices which raise efficiency concerns.

320. Our analysis in this chapter takes account of Auckland Airport's particular circumstances–the airport has signalled imminent charging for a second runway and has a large capital expenditure programme planned, in response to strong growth.

321. This analysis is relevant to the extent to which Auckland Airport has incentives to set prices that are likely to promote efficiency (section 52A(1)(b) of the Act).

Conclusions

322. Overall, we consider that Auckland Airport has continued to seek improvements to the efficiency of its prices. We note several positive steps, including the introduction of:

    322.1 differential charges for domestic passengers travelling on trunk and regional routes, further reducing the likelihood of cross-subsidisation between customer groups;

    322.2 parking charges for planes with time on the ground over six hours (with specified exemptions), in order to improve stand and apron efficiency; and

    322.3 differentiated charges for check-in services (to distinguish between traditional check-in counters, common-use bag drop facilities and dedicated kiosk/bag drop facilities), which have improved the ability for airlines to make price-quality trade-offs.

323. Auckland Airport has signalled the introduction of a RLC in PSE3 to recover the cost of holding land for the second runway (forecast to occur in 2028).[206] This has proved to be the most contentious issue with Auckland Airport's proposed charges. Auckland Airport states the RLC will be a NPV neutral charge (at the airport's cost of capital) that will be tracked in a transparent way over time against the carrying value of its assets held for future use.[207]

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[206] Auckland Airport states that the RLC will be $1.19 + GST per passenger and introduced no earlier than July 2020, and only once it has met certain spending and construction thresholds associated with the second runway. Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

[207] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

324. The airport suggests its objective in introducing the RLC is to mitigate a price shock at the time of commissioning the second runway. We consider there to be alternative approaches available to Auckland Airport to achieve this goal.

325. Given the RLC is proposed to be a flat rate charge, it is not structured to send price signals to users of the current runways. Such price signals might encourage more efficient use of the existing runway, and may ultimately help ensure that the second runway is commissioned at the optimal time.

326. Stakeholders have presented a range of views, arguing for and against the potential for airlines to meaningfully respond to price signals arising from differentiated charges based on time of day (peak pricing).

327. We consider it is possible that a differential between off-peak and peak charges, could minimise the adverse impact on demand of the proposed RLC. This could be a more efficient way of recovering Auckland Airport's fixed costs than applying a flat rate charge.

328. Such differentiated charges could be applied to the RLC or more widely across Auckland Airport's priced services.

329. Auckland Airport notes that on balance, it considered differential peak charges would be very complex to implement for PSE3. However, it has not ruled out peak charging in future and has committed to carefully reflecting on the use of peak pricing differentials for future pricing periods.[208] We encourage the ongoing consideration by Auckland Airport of differential peak charging.

330. We note Auckland Airport's commitment to consider the benefits of peak pricing in future pricing periods, and in the interim, test the elasticity of demand for peak and off-peak services through its route development initiatives. These include the promotion of new international routes and airlines to increase passenger and aircraft volumes.[209] We expect the airport to provide transparency in this area and consult on any resulting price and demand impacts, as part of its consultation with airlines in future pricing periods.

331. Auckland Airport also appears to have continued to set prices transparently in PSE3, and has had regard to price stability and certainty for stakeholders.

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208 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 24.

209 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A, page 2.

Our approach to assessing Auckland Airport's pricing methodology

332. We assess whether Auckland Airport's pricing methodology is likely to result in prices which raise efficiency concerns by considering the following pricing efficiency principles. This is consistent with our approach in the section 56G review.[210]

    332.1 Prices should be subsidy free.

    332.2 Prices should have regard to consumers' demand responsiveness.

    332.3 Where a good or service is scarce, the price should help ensure that the good or service is consumed by those that value it the most.

    332.4 Prices should enable consumers to make price-quality trade-offs or non-standard arrangements for services, where practical, to reflect the value they place on services.

    332.5 The development of prices should be transparent, and promote price stability and certainty for consumers, where demanded.

333. We agree with NZ Airports and Christchurch Airport, who noted the importance of considering an airport's particular circumstances when assessing an airport's pricing structure (and applying pricing efficiency principles).[211] Auckland Airport's current circumstances are likely to differ to other airports and over time.

Overall approach to assessing pricing efficiency outcomes

334. In applying each of these pricing efficiency principles to Auckland Airport's pricing structure, we take account of Auckland Airport's particular circumstances. In particular, we focus on whether Auckland Airport has set prices to encourage scarce airport services to be consumed by those that value them the most and to encourage the commissioning of its second runway at the optimal time. Auckland Airport has signalled imminent charging for a second runway and has a large capital expenditure programme planned, in response to strong growth.

335. We also note that a key feature of an airport's cost structure is the large proportion of fixed and common costs, which are not dependent on the level of output (eg number of passengers). This means airport prices largely recover fixed costs rather than the cost of servicing an additional aircraft (marginal cost).

336. We apply the principles described above to assess the airport's pricing efficiency. Transpower has broadly supported these principles and further suggested that "...prices should be actionable, simple (no more complex than necessary), and

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210 For example, see Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport – Section 56G of the Commerce Act 1986" (31 July 2013), paragraph D15.

211 Christchurch Airport "Draft Report on Auckland International Airport Ltd PSE3 Pricing Decisions" (29 May 2018), paragraphs 19-20. NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 100.

understood".[212] Elements of these objectives are embedded into our analysis of Auckland Airport's performance against the pricing principles.

337. In coming to our conclusions concerning Auckland Airport's pricing efficiency outcomes, we recognise that many factors can impact on efficiency–the structure of prices is only one tool and not always the most effective, depending on the industry and other constraints participants are subject to. We also recognise that not all the potential objectives of these principles may be able to be met at once–there can be trade-offs. Hence we have examined the extent to which Auckland Airport has considered these principles and in particular whether their pricing decisions are in direct conflict with these principles and if so why.

Prices should be subsidy free[213]

338. To be subsidy free, prices should be equal to or greater than the incremental cost of producing an additional service, and less than or equal to the standalone costs that would have occurred if the supplier solely undertook that activity.[214]

339. During our section 56G review, we concluded that Auckland Airport's pricing methodology for PSE2 was likely to better reflect the principle of being subsidy free than the methodology adopted for PSE1. We noted that Auckland Airport introduced several new charges, and aligned existing charges, to limit the likelihood of cross-subsidisation in PSE2.[215]

340. In PSE3, Auckland Airport has introduced differential charges for domestic passengers travelling on trunk and regional routes. This is to reflect the fact that domestic passengers travelling on trunk routes are more costly to serve than regional passengers that are subject to a simpler process.

341. BARNZ acknowledges that the evidence appears consistent with Auckland Airport attempting to improve the efficiency of its price structure over time, noting that the airport has removed subsidisation between different charges and costs.[216]

342. Our conclusion for PSE3 is that Auckland Airport has again made incremental improvements to its pricing, which are unlikely to result in cross-subsidies. We consider that the introduction of differential charges for domestic passengers travelling on trunk and regional routes is consistent with this.

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212 Transpower "Auckland International Airport's pricing decisions" (29 May 2018), page 2.

213 Subsidy free prices are generally a necessary but not sufficient condition for efficient pricing.

214 Covering incremental costs is sufficient to ensure there is no cross-subsidy. The stand-alone costs test can also be relevant to whether a cross-subsidy exists where a firm's profits are constrained. See Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" December 2010, paragraph 7.2.5 for further discussion on this issue.

215 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport – Section 56G of the Commerce Act 1986" (31 July 2013), paragraph D17.

216 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 8.

Prices should have regard to consumers' demand responsiveness

343. In an industry with high fixed and common costs, such as airports, prices based on efficient marginal costs would under recover the required revenues for airport services. Where this occurs, a possible efficient outcome would be to make up any shortfall by setting prices in a manner that has regard to consumers' demand responsiveness, to the extent practicable (eg, in accordance with Ramsey pricing principles). This works to minimise distortions to the efficient use of airport services while recovering total costs.

344. Applying Ramsey pricing principles would mean that fixed costs would be recovered by allocating more of those costs to those airport users who are relatively price insensitive (inelastic demand). Those users that are least sensitive to price increases pay the highest mark-ups and users that are most price sensitive pay the lowest mark-ups. For this to improve efficiency, the differentiated prices should increase use of the airport (output) compared to a common price for all customers.[217]

345. Ramsey pricing relies on the ability to price discriminate between groups of customers and requires information on demand characteristics of the customer groups. Those demand characteristics may be inferred to some degree from the aircraft weight and route characteristics of different flights.

International and domestic customers' demand responsiveness

Context and stakeholders' views

346. As a general point, we accept that it is difficult to determine the relative price responsiveness of domestic and international passengers. There are a range of stakeholder views, and international evidence on this, which may not be entirely applicable in the New Zealand context.

347. In our section 56G review, we acknowledged that Auckland Airport had considered consumers' demand responsiveness in its pricing methodology for PSE2. We noted that Auckland Airport had allocated common costs to reflect differences in demand elasticity (consistent with the Ramsey pricing principles), resulting in international passenger charges contributing a higher proportion to common airfield costs than domestic passengers.[218]

348. Auckland Airport has continued with this approach to the allocation of common costs, and has again had regard to consumers' demand responsiveness in PSE3.

349. BARNZ has argued that while international charges are generally higher, demand for domestic travel is usually less elastic than international travel. BARNZ is not

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[217] Specifically, under Ramsey Pricing, the price for each user (or group of users) of an airport service would be set by adding a percentage mark-up on marginal cost, with the size of the mark-up being inversely proportional to the price elasticity of demand of that user or group of users. The mark-ups are scaled up until revenues cover costs.

[218] Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport – Section 56G of the Commerce Act 1986" (31 July 2013), paragraphs D25-D26.

convinced that prices truly reflect the demand responsiveness of passenger groups, as more shared costs are being allocated to the more price elastic group of consumers.[219] We note that BARNZ raised similar concerns during the section 56G review.[220]

350. However, contrary to BARNZ's submission, Auckland Airport states in its pricing disclosure that domestic passengers have a higher price elasticity, ie, were considered more sensitive to price changes.[221]

Evidence

351. Auckland Airport's view appears to be supported by a 2007 report on air travel demand elasticities by InterVISTAS, who reviewed over 23 papers on airfare elasticities and concluded that:[222]

> "The literature review consistently found that the fare elasticities on short-haul routes were generally higher than on long-haul routes. In part, this reflects the opportunity for inter-modal substitution on short haul routes (e.g., travellers can switch to rail or car in response to air fare increases). While the geographic breakdowns capture some variation by length of haul, there is still considerable variation within each market. In particular, very short-haul flights (approximately less than 1 hour flight time) are subject to greater competition from other modes."

352. InterVISTAS' report cites our Part 4 Inquiry into Airfield Activities at Auckland, Wellington, and Christchurch International Airports, which applied price elasticities of demand for air travel of -1.8 and -1.3 for international and domestic passengers, respectively. These estimates were based on overseas studies.[223] In other words, we considered international passengers' demand for air travel to be more price sensitive (elastic) to changes in ticket prices than domestic passengers (at all three airports). We noted that "this is because much more international travel is leisure related, and hence more discretionary and income sensitive, and because of the availability of substitute destinations. In addition, international travel is typically more costly than domestic travel, implying that a given percentage rise in price would have a relatively larger 'income effect'".[224]

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219 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 7.

220 During the s56G review, BARNZ submitted that many international travellers are as responsive to pricing signals as domestic passengers, and that international airlines consider their charges are higher than justified. BARNZ "Submission by BARNZ on Commerce Commission Draft Section 56G Report on Auckland Airport" (31 May 2013), page 17.

221 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 71.

222 InterVISTAS Consulting Inc "Estimating Air Travel Demand Elasticities – Final Report" (28 December 2007), page 35.

223 InterVISTAS Consulting Inc "Estimating Air Travel Demand Elasticities – Final Report" (28 December 2007), page 15. This information can be found at: Commerce Commission, Final Report Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports" (1 August 2002), paragraph 3.85 and Table 3, page 81.

224 Commerce Commission, Final Report Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports" (1 August 2002), paragraph 3.84.

353. This view is somewhat contrary to InterVISTAS' finding that short-haul (or domestic) routes are more price sensitive, given one would expect significant overlap between short-haul flights and domestic routes. InterVISTAS' finding may have less relevance in the New Zealand context. This is because there is no evidence that airlines compete directly with other modes of transport (eg high-speed rail, available in Europe) and all routes between the South and North involve crossing a body of water, which also reduces alternative travel options.

354. Nonetheless, our Part 4 Inquiry report also noted that long-haul flights are less likely to be deterred from using airport facilities by an increase in landing charges, because the increase is likely to form a smaller proportion of their costs and of passengers' airfares.[225] As a result, we found international passengers' derived demand for airfield services at Christchurch and Wellington Airports to be less price sensitive to changes in landing charges than domestic passengers, but not at Auckland Airport (ie, international passengers' derived demand for airfield services was still found to be more price sensitive to landing charges than domestic passengers).[226] This specific finding is not consistent with Auckland Airport's perspective–that domestic passengers are more price sensitive. However, the information that informed this specific finding may be somewhat outdated.[227]

Our view

355. It is plausible that domestic travel is less sensitive to ticket price changes (consistent with BARNZ' position) but that domestic travel is more sensitive to changes in landing charges, which make up a bigger proportion of their fare.

356. Nonetheless, and as we noted above, we accept that it is difficult to determine the relative price responsiveness of domestic and international passengers. There is a range of stakeholder views on this, and international evidence may not be entirely applicable in the New Zealand context.

357. Consistent with our findings on Auckland Airport's PSE2, our conclusion is that Auckland Airport has considered demand responsiveness of different consumer groups in its pricing methodology. We outline below how the airport could have given greater consideration to the benefits of applying differentiated prices between peak and off-peak periods, to the extent demand is more inelastic at peak periods.

Where a good or service is scarce, the price should help ensure that the good or service is consumed by those that value it the most

358. Scarcity at airports may arise through congestion at facilities, and a lack of capacity where required.

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225 Commerce Commission, Final Report Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports" (1 August 2002), paragraph 3.91.

226 Commerce Commission, Final Report Part IV Inquiry into Airfield Activities at Auckland, Wellington and Christchurch International Airports" (1 August 2002), paragraph 3.97 and Table 3.

227 This finding was based on data provided by Air New Zealand in 2002 on average proportions of landing charges to ticket prices at Auckland, Wellington and Christchurch Airport.

359. Where a service is scarce and demand for the service exceeds supply, prices can promote allocative efficiency by reflecting the opportunity costs of consuming the service. This will likely result in higher prices for those scarce resources and will ensure only those who benefit most from consuming the service do so.

Auckland Airport is facing some congestion challenges

360. During the section 56G review, we indicated that it was unclear whether Auckland Airport's pricing methodology would ensure the efficient use of the runway if congestion arose during PSE2.[228]

360.1 At the time, Auckland Airport considered it too early to introduce congestion charges and instead looked to airline and Airways' (New Zealand's air navigation service provider) processes and procedures to maximise use of the existing runway.[229]

360.2 Airlines also generally considered it inappropriate to have congestion charging and favoured a 'toolbox' approach to managing any future congestion at Auckland Airport. For example, Air New Zealand noted that this included changes to their fleet, voluntary discussions with airlines to change schedules, collaboration with Airways and modifications to the existing runway, as well as congestion charges.[230]

360.3 Auckland Airport indicated that congestion charges may be introduced in the future to send appropriate price signals, and ensure the best use of assets, if required.[231]

361. Auckland Airport subsequently experienced significant demand growth over PSE2 and the runway is now congested at certain times of the day.

362. To accommodate future growth, Auckland Airport is intending to build a second runway in 2028. The airport is also introducing a RLC in PSE3. This is to recover some of the holding costs on land for the second runway.

363. Auckland Airport states that the RLC will be $1.19 + GST per passenger and only introduced after it has met certain spending and construction thresholds associated with the second runway.[232]

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228 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport – Section 56G of the Commerce Act 1986" (31 July 2013), paragraph D23.

229 Commerce Commission, Transcript of Auckland Airport Section 56G Conference, held on 26 February 2013, pages 82-83.

230 Commerce Commission, Transcript of Auckland Airport Section 56G Conference, held on 26 February 2013, pages 83-84.

231 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport – Section 56G of the Commerce Act 1986" (31 July 2013), paragraph D23.

232 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

Consideration of peak pricing to help alleviate congestion

364. Consistent with our approach under section 56G, we have considered whether Auckland Airport's prices are likely to allocate congested or scarce services efficiently to manage competing demands for limited capacity and resources. This includes considering the extent to which differentiated charges, including through the RLC, could provide efficiency benefits by sending price signals to those parties that have the greatest influence on determining when the new investment in the second runway is needed.

365. Peak pricing can be important (and efficient) where there is constrained capacity at peak times. For example, the airport could set lower prices for use of the airfield at an under-utilised time of day (combined with higher prices for use of the airfield at times of day where there is constrained capacity). If peak demand is sufficiently responsive to these price differentials, this may incentivise change in usage patterns and help alleviate congestion at peak times. This could promote both allocative and dynamic efficiency by improving quality of services, reducing costs of a given service, or delaying, or avoiding the need for future investment in capacity expansion.

366. Peak pricing could still improve allocative efficiency where peak demand is relatively unresponsive to price changes and off-peak demand is relatively responsive. To the extent that this increased overall demand, this would improve allocative efficiency relative to setting constant prices. For example, lower charges at off-peak times (offset if necessary by higher charges at peak times) could encourage an airline (existing or new) to schedule additional services into off-peak times.[233] In this case, the purpose of differentiating prices to reflect differences in demand responsiveness is to recover fixed costs with the least distortion in the use of the airport.[234] This is an application of Ramsey pricing principles, which was described in the previous section.

367. Despite this, Auckland Airport has not introduced any differential charges between peak and non-peak users, or congestion charging for PSE3. In addition, the RLC is proposed to be a flat rate charge. It is therefore not structured to send price signals to peak users. Such price signals might encourage more efficient use of the existing runway, and ultimately may help ensure that the second runway is commissioned at the optimal time.

368. We discuss these decisions, and consider stakeholders' views on the potential merits of peak pricing below.

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233 Peak charges may not need to increase if the higher revenue from additional off-peak demand is higher than the marginal cost of serving that additional demand and any foregone revenue from lowering prices for existing off-peak users.

234 This would promote allocative efficiency. Here the degree to which the charges users pay contribute to fixed costs will reflect their demand reaction to a higher (or lower) price. The most price sensitive customers pay the least to avoid them being inefficiently priced off the airport.

Stakeholders' views on differential charges between peak and off-peak users

369. In general, both Auckland Airport and airlines were not supportive of the introduction of peak pricing.

370. Auckland Airport made the following points:

370.1 Peak pricing would be complex to implement, and it is not clear how this would help smooth the price path ahead of the commissioning of the second runway.[235]

370.2 Auckland Airport will continue to work with airlines to promote efficient use of the runway, and ensure investment in further capacity occurs at the right time. It has committed to leading an industry forum to target increased efficiencies of the existing runway.[236]

371. Auckland Airport reiterated this view in response to our draft report, highlighting that the benefits of introducing peak pricing would be highly uncertain and the costs of implementation would be high. It also noted that it was grappling with the implementation practicalities of a number of price structure challenges, which would have been stretched even further had it attempted to introduce a peak pricing differential.[237]

372. An expert report by Estina for Auckland Airport addressed the issue of peak differentials in detail.[238] While Estina acknowledged that there would be some merit to introducing a peak pricing differential, it also noted that there are a number of complex issues that need to be considered when deciding on such a charge.

373. Ultimately, Estina concluded that "there is no compelling case to introduce peak charging for PSE3 at Auckland Airport."[239] In particular, Estina made the following points:

373.1 Peak differentials are more commonly seen at airports that do not have an obvious expansion option and where secondary airports can take some of the load during peak periods.

373.2 Peak pricing would be difficult to implement under a five-year consultation period, as the application of peak differentials to move demand out of the

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235 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 20.

236 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 20.

237 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A, page 1. Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraphs 23-24.

238 Estina "Review of feedback on Auckland International Airport Limited's pricing proposals, as they relate to peak/off-peak differential charges proposed by airlines" (May/June 2017).

239 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: submission on process and issues paper" (28 November 2017), page 22.

peak period shifts the peak. This means that pricing differentials need to be applied dynamically which is difficult to achieve under the pricing consultation requirements.

374. BARNZ acknowledged that "the introduction of a peak congestion price signal would be unlikely to have a material effect on runway usage, unless the signal was extremely (impractically) strong."[240] BARNZ explained that:[241]

> Airlines choose slots based on demand for travel at particular times, co-ordination of slots with other airports and longer haul route connections. Any price signal that could realistically be introduced would not add much to existing incentives.

375. BARNZ views are consistent with the view of the IATA, which suggest that peak/off-peak charges are not an effective means of easing capacity constraints. IATA opposes peak or congestion charging "as it redistributes costs between different airline users arbitrarily":[242]

> Peak charging is largely ineffective in addressing the congestion and capacity shortfalls it is supposed to resolve. It can even make matters much worse by introducing distortions in the overall air transport system.
>
> Airlines have little opportunity to adjust to peak charging in an efficient way due to the complex task of scheduling operations. The challenge is to maximize aircraft utilization and optimize aircraft rotation within the constraints of airport curfews, opening hours, increasing environment restrictions, crew availability, and many other factors. In addition, the market dictates airline scheduling, as schedules are constructed in response to passenger and cargo demand.

376. BARNZ views are also supported by the International Civil Aviation Organization (ICAO), which notes that "[t]he effectiveness of peak pricing in redistributing traffic is, however, limited by the fact that very large differentials are needed for airlines to accept the commercial and operating disadvantages of off-peak arrivals or departures".[243]

Applying peak pricing to the RLC

377. Applying peak pricing to the RLC, would involve setting an off-peak RLC that is lower than the peak RLC. This could help to send price signals about future costs in a way directly intended to affect behaviour, where the investment in the runway is driven by peak demand.

378. Assuming it is the relatively inelastic flights landing at peak times, differentiating the RLC between peak and non-peak times can also be considered through its potential

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240 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), page 16.

241 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), pages 16-17.

242 IATA "Peak/Off-Peak Charges", https://www.iata.org/policy/Documents/peak-off-peak-charges.pdf

243 ICAO "Airport Economics Manual – doc 9562" (Third edition – 2013), paragraph 4.148.

to minimise the impact on demand. This is an application of Ramsey pricing principles, which was described in the previous section.

379. The RLC will be imposed as a flat rate per passenger charge, regardless of time of arrival. In its price setting disclosure, Auckland Airport noted it had considered whether the RLC should apply to all traffic or peak traffic only.

> On balance, Auckland Airport considers it is appropriate for the Runway Land Charge to apply to all passengers, not just passengers travelling at peak times. Although peak demand will be a key contributor to the need for and timing of the second runway, the broader resilience of the runway system will also be a key factor in the decision to commence construction on the second runway.

380. A number of submitters commented on the issue of applying peak-based charging to the RLC.

381. Submissions from BARNZ and Air New Zealand indicated there would be little demand response from airlines even if the RLC were to be designed as a peak demand charge.

382. Air New Zealand submitted (emphasis added):[244]

> The pricing structure for the second runway is proposed to be levied as a flat charge. Congestion charging, or peak pricing, was discussed during consultation, but Air New Zealand's feedback was, and remains, that **congestion charging is not a price mechanism that airlines are able to respond to, and therefore would not be able to be implemented in such a way as would change usage patterns. Airline schedules are influenced by a number of elements, overriding any ability airlines might have to respond to congestion charging**.
>
> Domestically, Air NZ's network is driven by the demands of the business day. As much as we might want to smooth peaks of runway use, we are not able to sell something our customers do not want to buy. In the same way as electricity networks must negotiate peaks in network planning, so must airports.
>
> Internationally, our network is influenced by availability of arrival and departure slots at congested international ports. We are wholly unable to influence slot times at these ports, which has a direct impact on our schedule in New Zealand.

383. BARNZ and Air New Zealand maintained these positions in their response to our draft report, with Air New Zealand stating that "both Auckland Airport and airlines consider that peak pricing would not incentivise change in usage patterns, and that this includes any uptake of off-peak use."[245] Auckland Airport responded to this,

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244 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 54-56.

245 BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 6. Air New Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), page 3.

noting that Air New Zealand's statement was an incorrect portrayal of its position, as outlined above.[246]

384. On the other hand, Qantas stated that "as the only low fares airlines operating domestically at the airport, Jetstar's operations are underpinned by low cost pricing principles, including differentiated pricing based on time of service." In this context, it suggested that peak pricing could provide incentives to alter behaviour and spread peak demand (and would be far more successful in doing so than the RLC, which it views as counter-productive).[247]

385. Munro Duignan, in its expert report for BARNZ, noted that applying the RLC:[248]

> at the same rate for all passengers, without regard to whether capacity constraints are binding at the time of the specific flight, would move airfares yet further away from a fully efficient configuration. Specifically the percentage differential between peak and off-peak fares is likely to be further reduced, albeit by a small amount.

386. In line with this, BARNZ suggest that additional uniform charges such as the runway land charges reduce rather than improve airport pricing efficiency. However, as discussed above, BARNZ does not support differential charges, considering "the introduction of a peak congestion price signal would be unlikely to have a material effect on runway usage, unless the signal was extremely (impractically) strong."

387. In our draft report, we noted the views of BARNZ, Air New Zealand, IATA and ICAO suggested there may be little demand response from airlines to peak pricing and as a consequence, peak pricing will probably not make much difference to congestion and thereby improve efficiency.

388. However, we also stated that Auckland Airport should have given relevant consideration to the benefits of decreasing the charge on non-peak users relative to peak users, as this could improve allocative efficiency (relative to the flat rate charge) by minimising the adverse impact on demand of these higher charges – this is an application of Ramsey pricing principles. We made this statement in relation to the RLC and more generally across Auckland Airport's current pricing structure.

389. Auckland Airport responded to our draft report, stating that:[249]

> [W]e had not specifically turned our mind to the Ramsey Pricing question of whether allocative efficiency may be enhanced by recovering the RLC from users with lower demand responsiveness. As Auckland gets nearer to the commissioning of the second runway, we may need to re-evaluate the mechanisms of the RLC at future pricing periods (and our

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246 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 23.

247 Qantas Group "Qantas Group's Response to Draft Report on Auckland Airport's PSE3 Pricing Decision" (29 May 2018), page 1.

248 Munro Duignan "Report on Issues Regarding Auckland Airport's Runway Land Charge" (28 November 2017), page 4.

249 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A.

> consultation obligations will require us to reconsider the charge when we reset prices in any event). Auckland Airport will carefully reflect on the Commission's feedback at that time.

390. Auckland Airport also noted that applying peak pricing differentials (as a way of implementing Ramsey pricing principles) was not a major feature of its pricing consultation–although it did carefully consider the concept of peak charging more generally, including reflecting on airline feedback.[250]

391. Furthermore, Auckland Airport stated that:[251]

> We will carefully reflect on the Commission's suggestion for future pricing periods. In the interim, Auckland Airport will continue to test the elasticity of demand to peak and off-peak services through its route development function and the allocation of route development or other off-peak incentives throughout the period.

392. Auckland Airport also reinforced the effective price signals of its uniform RLC. It stated it is strongly of the view that the price signals of the RLC are an important motivator behind senior airline representatives' recent sponsorship of the Airfield Capacity Enhancement programme–which had previously stalled. It suggests that if the programme can achieve materially greater efficiencies than currently projected, such that construction of the second runway is not triggered when currently planned, the runway land charge would be deferred.[252]

393. While BARNZ stated that:[253]

> [w]hile the Draft Report is correct in theory, in practice international airline slot choice is driven by availability of slots at other ports and connection times for onward flights. Setting an off-peak charge that is lower than a peak charge may not have a noticeable effect.

394. On the other hand, Qantas submitted that differentiated peak pricing will be far more successful in altering behaviour and spreading peak demand than the counter-productive RLC (noting that Jetstar's operations include differentiated pricing based on time of service).[254]

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250 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A.

251 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Appendix A.

252 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 22d. We understand the Airfield Capacity Enhancement (ACE) Programme is intended to find efficiencies on the current runway and defer the need for the construction of a second runway (see BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 10). Auckland Airport's 2017 Annual Disclosure notes the ACE group was investigating initiatives to increase runway capacity. Auckland Airport "Annual Information Disclosure – Regulatory Performance for the year ended 30 June 2017" (no date), page 47.

253 BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 6.

254 Qantas Group "Qantas Group's Response to Draft Report on Auckland Airport's PSE3 Pricing Decision" (29 May 2018), page 1.

Our view

395. Given the response from Qantas and Auckland Airport, it is possible that an off-peak charge, set below a peak charge, could minimise the adverse impact on demand of the proposed RLC. This could be a more efficient way to recoup Auckland Airport's fixed costs.

396. We recognise that the RLC could have a marginal impact on incentivising more efficient use of the airfield and delaying the investment in the runway, as suggested by Auckland Airport. We note this has not been raised by airlines. To the extent any incentive did exist, we expect airlines would have a similar incentive to alter their behaviour to delay the runway under the alternative scenario, where there was no prospect of a RLC prior to the commissioning of the runway but rather the prospect of an imminent runway and associated charges after it was commissioned.

397. Overall, stakeholders' responses suggest there are a range of views on the potential for airlines to meaningfully respond to price signals arising from differentiated charges based on time of day (peak pricing). Differentiated charges could be applied to the RLC or more widely across Auckland Airport's priced services.

398. Auckland Airport notes that on balance, it considered differential peak charges would be very complex to implement for PSE3. However, it has not ruled out peak charging in future and has committed to carefully reflecting on the use of peak pricing differentials for future pricing periods.[255] We encourage the ongoing consideration by Auckland Airport of differential peak charging where it can result in efficiency benefits that outweigh implementation costs.

Prices should enable price-quality trade-offs

399. Consumers may demand different levels of quality or quantity of service, for which they are willing to pay different prices. Where practical, consumers should therefore be able to make price-quality trade-offs. This may include the use of non-standard contracts or commercial agreements for individual consumers.

400. In our section 56G review, we concluded that there was no evidence that Auckland Airport's pricing methodology for PSE2 better enabled price-quality trade-offs than the PSE1 pricing methodology. However, we considered this was not necessarily a concern given that airlines had not raised any issues regarding their ability to make price-quality trade-offs at Auckland Airport.[256]

401. For the PSE3 period, Auckland Airport has introduced:

    401.1 parking charges for planes with time on the ground over six hours (with specified exemptions), in order to improve stand and apron efficiency; and

[255] Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 24.

[256] Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport – Section 56G of the Commerce Act 1986" (31 July 2013), paragraph D28.

401.2 differentiated charges for check-in services, to distinguish between traditional check-in counters, common-use bag drop facilities and dedicated kiosk/bag drop facilities.

402. In its submission, BARNZ indicated that the new parking charges should encourage airlines to use less apron space, and new check-in charges promote the use of kiosks (although some airlines do not agree with the view that kiosks are more efficient).[257]

403. BARNZ also noted that the pricing methodology does not provide broader price-quality trade-offs on other issues (for example, remote or contact stand and allocation of departure gates).[258] However, it acknowledged that price signals for such items may well be unduly complex to implement.[259]

404. Auckland Airport has suggested that the introduction of parking charges has had an immediate effect on discouraging inefficient parking on the airfield.[260] We also note that parking charges can have a wider beneficial effect by encouraging airlines to fly rather than park planes, which can increase capacity and competition on some routes, putting downward pressure on prices.

405. Auckland Airport also noted that the structure of check-in charges is intended to promote optimal use of scarce resources, stating that relatively less space intensive services are priced lower than more space-hungry service options. Since prices were set, a further two airlines have transitioned to the common-use kiosks, and Auckland Airport anticipates take-up to increase further ahead of 1 July 2018 (when it transitions from the traditional counter pricing approach to per passenger pricing).[261]

406. Our conclusion is that the changes to Auckland Airport's pricing methodology for the PSE3 period have improved the ability for consumers to make price-quality trade-offs compared to the PSE2 period.

The development of prices should be transparent, and promote price stability and certainty for consumers, where demanded

407. In our section 56G review, we concluded that Auckland Airport appeared to have set prices transparently, and had regard to price stability and certainty for stakeholders when doing so.

408. Auckland Airport stated that it sought to build on the approach established in PSE2 when developing its pricing methodology for PSE3. In particular, it sought to reflect the pricing principles that were adopted for PSE2, to promote stability of pricing over

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257 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 6.

258 The trade-off between remote or contact stands includes consideration of bussing.

259 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 8.

260 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 22d.

261 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross submission on process and issues paper" (19 December 2017), page 2.

time where this was considered appropriate.[262] The airport has indicated that the introduction of the RLC will help mitigate the prospect of a price shock.

409. BARNZ has indicated that Auckland Airport's pricing methodology appears relatively stable and the changes being made to it for PSE3 are mostly incremental.[263]

410. BARNZ also stated that Auckland Airport's pricing development process is transparent to substantial customers, noting that Auckland Airport consults extensively on its prices with substantial customers, providing descriptions and explanations of its proposals. However, BARNZ also noted that:[264]

410.1 the airport does not fully consult stakeholders other than the substantial customers; and

410.2 it would have been helpful if the airport's pricing model provided a direct link between changes in input costs and changes in prices.

The airport considers the runway land charge will help to mitigate price shocks

411. In its price setting disclosure, Auckland Airport noted that the objective of the RLC was to "provide a tool that can help create a sustainable price path for the second runway development over time."[265]

412. Auckland Airport considered the decision to introduce the RLC was "a modest first stepping stone towards achieving a long-term price path for existing and future customers that is affordable, and reduces the prospect that a price shock becomes the key barrier to the realisation of a second runway."[266]

413. Auckland Airport also noted it has taken guidance from the High Court which indicated that price smoothing in advance of commissioning future assets may be economically efficient.[267] The Court, in its judgement on the appeal of the Part 4 IMs, noted:[268]

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262 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 69-70.

263 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 7.

264 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 8.

265 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 57.

266 Auckland Airport has calculated that, in the absence of any charge, the land set aside for the second runway is forecast to grow from approximately $300 million at the start of FY2018 to over $666 million when it is forecast to be commissioned midway through 2028. This growth in value is solely due to the accrual of holding costs and does not include any revaluation of the underlying land. Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 57.

267 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: submission on process and issues paper" (28 November 2017), pages 16-17.

268 Wellington International Airport Ltd v Commerce Commission [2013] NZHC 3289 at [919].

> We agree with the Airports' proposition that price smoothing ahead of the (likely reasonably imminent) commissioning of future assets may be an economically efficient approach.

414. However, some submitters did not support Auckland Airport's reasoning. BARNZ stated: "The Airport argues the land charge is necessary to smooth prices, but airlines will pay the prices and they have a strong preference for the step-up to occur when the runway is commissioned."[269]

415. Air New Zealand submitted that the RLC would not be successful in preventing a price shock for airlines. It calculated that the RLC would only reduce the price increase at the time the second runway is expected to be commissioned by about $0.75 per passenger.[270]

416. In its expert report on behalf of BARNZ, Munro Duignan noted:[271]

> Arguably, in a workable competitive market, an investor in an extremely long life asset such as a runway would look to recover most of its return on the land component of the asset over a long time frame as utilisation increased.

Airlines have raised equity concerns arising from the RLC

417. In its submission, BARNZ stated that "paying for an asset many years before it can be used creates inter-generational and inter-airline equity problems".[272]

418. Qantas raised a similar point, suggesting that current airlines that will be charged the RLC will be cross-subsidising future entrants".[273] While A4ANZ considered the RLC to represent "Auckland Airport attempting to pre-fund the runway by passing costs on to current airline customers and their passengers – some of whom may not receive any benefits of the second runway."[274]

419. These views suggest that the airlines that are required to pay the RLC may differ from the airlines that will ultimately benefit from the second runway once it is commissioned. This issue would arise if airlines change their use of Auckland Airport over the period between when the RLC is triggered and when the second runway is commissioned (including if they enter or exit the market completely).

420. While Part 4 of the Act is not explicitly concerned with equity, this could, in theory, have efficiency impacts as it could undermine the intended price signals from the RLC. This is because those airlines facing the price signal may not receive the full

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269 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), page 15.

270 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 47.

271 Munro Duignan "Report on Issues Regarding Auckland Airport's Runway Land Charge" (28 November 2017), page 5.

272 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), page 15.

273 Qantas "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), page 1.

274 A4ANZ "Submission - Review of Auckland International Airport's pricing decisions & expected performance (July 2017 - June 2022)"" (29 May 2018), page 2.

benefit (or detriment) of any action (or lack of action) they take in response to this price.

421. In general, this risk will be mitigated where commissioning of the asset in question is likely reasonably imminent and where the asset owner's customer base is reasonably stable. Both of these factors seem to apply, at least to some degree, in the case of the RLC. This may alleviate inter-airline equity concerns.

422. In contrast, Auckland Airport stated that the RLC "ensures a more equitable distribution of currently accruing holding costs over both current and future users".[275] In its price setting disclosure, the airport noted that "current users are contributing to the need for and timing of a significant, once-in-a-generation second runway investment".[276]

Conclusion

423. Overall, we consider that Auckland Airport appears to have continued to set prices transparently in PSE3, and has had regard to price stability and certainty for stakeholders.

424. While we acknowledge BARNZ's views about improvements that could have been made to the airport's pricing model, these appear to be relatively minor issues in the overall context of Auckland Airport's approach to developing prices.

425. Auckland Airport states its objective of introducing the RLC is to mitigate a price shock at the time of commissioning the second runway. We consider there to be a range of approaches available to Auckland Airport to achieve this goal.

426. For example, Christchurch Airport used a 'levelised price path' in its PSE2, which changed the profile of its returns over the estimated life of the assets to reflect expected lower utilisation of its new integrated terminal.[277] Auckland Airport could potentially adopt a similar approach to mitigate future price shocks.

427. We have previously recognised the potential for a range of pricing approaches to be adopted in workably competitive markets. In the IM Determination reasons paper we stated:[278]

> No specific treatment [of future development land] is implied by the reference to workably competitive markets. While capacity constraints could cause higher prices for services supplied using existing land before congestion eases, relationships between suppliers and consumers could be such that the price would not rise until additional land comes into service, or price rises could be delayed even further into the future in order to encourage greater utilisation of the associated assets in the short- to medium-run.

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275 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: submission on process and issues paper" (28 November 2017), page 16.

276 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 57.

277 Christchurch Airport "Price setting disclosure" (19 December 2012).

278 Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), paragraph 4.3.76.

428. We continue to hold this view. We are not convinced by the suggestion from Munro Duignan that the framework of a workably competitive market necessarily implies a particular approach to recovering the cost of long-life assets.[279] For example, it is plausible that in a workably competitive market, congestion or the need to bring forward new investment may be signalled in prices prior to the investment being made.

429. By noting that current users are contributing to the need for and timing of a significant runway investment, Auckland Airport is noting that the RLC is being levied on parties that are exacerbating the need for the second runway. While this is the case, it is the peak users, which have the greatest influence on determining when the new investment is needed. The RLC is proposed to be a flat rate charge and is not structured to send price signals to those peak users.

430. As noted above, we encourage the ongoing consideration by Auckland Airport of differential peak charging where it can result in efficiency benefits that outweigh implementation costs.

[279] We also reject a proposal in BARNZ's submission that the RLC "has a precedent effect at a regional level". Other jurisdictions operate according to their own regulatory frameworks and are not bound by particular airport decisions here. Such concerns are also outside of the remit of section 52A.

Attachment A Our assessment of Auckland Airport's cost of capital

A1 This attachment contains the analysis underpinning our view that, based on the evidence provided by Auckland Airport for the purposes of this review, Auckland Airport has not sufficiently justified its target return on its aeronautical services of 6.99%.

A2 This analysis is a key input to our conclusion that Auckland Airport has not sufficiently justified its expected returns on its total RAB of 7.06%, which is discussed in **Chapter 2**.

Structure of this attachment

A3 This attachment sets out our:

A3.1 framework for assessing Auckland Airport's target return, taking into account the relevant context of the IM Review undertaken in 2016 and the previous section 56G reports; and

A3.2 assessment of Auckland Airport's target return, focussing on the reasons it has provided for adopting a higher cost of equity and cost of debt than our benchmark values.

Framework for assessing Auckland Airport's target return

A4 This section discusses our approach to assessing Auckland Airport's target return in this review. This approach differs from the section 56G reviews undertaken in 2013 and 2014, reflecting changes to the IMs made in 2016.

A5 This section discusses:

A5.1 our past approach in the section 56G reviews, where we primarily focussed on the 75th percentile WACC estimate;

A5.2 the changes made in the IM Review, which led to us now publishing only a mid-point WACC estimate and associated standard error;

A5.3 our mid-point WACC estimate for airports as at 1 April 2017, which is a key reference point for this review; and

A5.4 our approach for assessing Auckland Airport's target return in this review, in light of the changes made in the IM Review.

Our approach in the section 56G reports primarily focussed on the 75th percentile

A6 We considered a range from the mid-point to 75th percentile when assessing airport profitability in the section 56G reports. We noted that:[280]

A6.1 the mid-point (50th percentile) was the appropriate starting point;

A6.2 the 75th percentile was also considered to allow for the uncertainty of estimating the true cost of capital, in light of the potential asymmetric consequences of estimation error on pricing and investment; and

A6.3 the low end of the range (the 25th percentile) was not relevant when considering whether airports were targeting excessive profits.

A7 Any supplier-specific adjustments to our benchmark cost of capital were rejected in the section 56G reports. We made the following points.[281]

A7.1 The purpose of IMs is to promote certainty in the rules and assumptions to assess performance. This certainty would be undermined by ad hoc adjustments.

A7.2 A supplier which sets prices based on a higher estimate of cost of capital than the actual cost at which capital is available in an industry cannot expect consumers in a workably competitive market to pay these higher prices.

A7.3 Although individual airports are subject to company-specific risks, investors can diversify these away. The cost of capital reflects risks which investors cannot diversify away.

A8 This approach reflected our original IM Determination in 2010, where we decided to use a WACC range from the 25th to the 75th percentile. We also decided that service-specific (ie, industry-wide), rather than supplier-specific, WACC estimates would be used.[282]

A8.1 We noted that leverage, debt premium and beta could potentially be considered on a supplier-specific basis.

A8.2 However, we considered each of these parameters individually and concluded that service-specific estimates would be more appropriate for each of them.

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280 For example, see: Commerce Commission "Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Wellington Airport Section 56G of the Commerce Act 1986" (8 February 2013), paragraphs F26-F50.

281 For example, see: Commerce Commission "Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Wellington Airport Section 56G of the Commerce Act 1986" (8 February 2013), paragraphs F45-F50.

282 Commerce Commission "Input methodologies (airport services): Reasons paper" (December 2010), paragraph E2.82.

A9 In the section 56G reports the upper limit of our WACC range (the 75th percentile) was effectively the benchmark used to assess airport profitability. This was also the percentile that was used when setting price-quality paths for energy businesses at that time.[283]

We now only publish a mid-point WACC

A10 In the 2016 IM Review we decided to change our approach, due to two main problems with the previous framework:[284]

A10.1 the upper limit of our WACC range had become the de facto benchmark when assessing airport profitability; and

A10.2 there was limited and weak rationale for using the 75th percentile as the upper limit of the WACC percentile range.

A11 We decided to remove the WACC range, and instead publish only the mid-point WACC and a standard error so that any required percentile can be calculated. We noted that this approach:[285]

A11.1 enables flexibility in assessing the acceptability of airport returns, and will reduce the focus of any assessment on the upper limit of the range; and

A11.2 will provide flexibility to enable any assessment to take into account different contextual factors affecting an airport's required return expectations, or the expectations of a particular project.

A12 The 2016 IM Review also reiterated our 2010 decision that the 50th percentile is the appropriate starting point for any assessment of airport profitability.[286]

A13 Given airports are not subject to price-quality path regulation, it is not necessary to specify a particular WACC percentile estimate. This is in contrast to electricity lines and gas pipelines, where we specify the 67th percentile WACC estimate for price-quality path regulation.

Our mid-point WACC estimate for airports as at 1 April 2017

A14 When considering Auckland Airport's target return for this review, the key reference point is our mid-point WACC estimate for airports as at 1 April 2017. This was our most recently available WACC estimate for airports at the time Auckland Airport set its prices for PSE3.

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283 We now use the 67th percentile when setting price-quality paths for energy businesses. Commerce Commission "Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services – Reasons paper" (30 October 2014).

284 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph X4.

285 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), page 3.

286 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 22 and 87.

A15 The parameter values used to calculate our airports WACC estimate as at 1 April 2017 are shown in Table A1 below.[287]

Table A1 Parameters used to calculate our airports WACC estimate as at 1 April 2017

Parameter	5 year estimate
Risk-free rate	2.76%
Average debt premium (A-)	1.45%
Leverage	19%
Asset beta	0.60
Equity beta	0.74
Tax adjusted market risk premium	7.0%
Average corporate tax rate	28%
Average investor tax rate	28%
Debt issuance costs	0.20%
Cost of debt	4.41%
Cost of equity	7.17%
Standard error of WACC	0.0146
Mid-point vanilla WACC	6.64%
Mid-point post-tax WACC	6.41%

Note: The cost of debt is calculated as the risk-free rate + debt premium + debt issuance costs. The cost of equity is calculated as the risk-free rate × (1- investor tax rate) + the equity beta × the tax adjustment market risk premium. The mid-point vanilla WACC is calculated as the cost of equity × (1 - leverage) + the cost of debt × leverage.

Our proposed framework for assessing Auckland Airport's target return

A16 We have developed a framework for assessing Auckland Airport's target return in this review, taking into account the relevant context of the section 56G reviews, and the changes made during the IM Review in 2016.

A17 Our high-level framework for assessing target returns, including the key factors we have considered is set out below.

[287] *Cost of capital determination for information disclosure year 2018 for electricity distribution services and specified airport services (March year-end disclosure year)* [2017] NZCC 7, table 7, page 11.

Departure from mid-point: Is the airport's target return different to our mid-point WACC estimate?

- The mid-point WACC represents our starting point when assessing returns for profitability analysis, but we accept that there may be legitimate reasons for an airport to target returns that are different to our mid-point WACC estimate.[288]
- If the airport has departed from our mid-point WACC estimate, what are each of the parameter values used? Has the airport applied an uplift to its mid-point cost of capital (for example, due to asymmetric risks), and if so, what adjustment is made?

Legitimate reasons for departure in relation to each WACC parameter: For each WACC parameter (including any overall WACC uplift), what is the explanation for departing from our IM-based estimate?

- What evidence is provided to support the departure? (For example, is there support from academic articles or other regulatory decisions?). Note: the onus is on airports to provide evidence/sufficient reasoning on any relevant factors.[289]
- Has the airport considered consistency with its past pricing decisions (ie, has it applied the same logic consistently over time, or considered the trade-off between short-term fluctuations in parameter values vs predictability)?
- Are we satisfied that the evidence provides legitimate reasons for the departure from our benchmark value, in light of the Part 4 purpose (particularly the section 52A(1)(d) requirement to limit the ability of airports to earn excessive profits)?[290]
- **If we are not satisfied there are legitimate reasons, then the airport-specific adjustment to that parameter is unjustified.**

[288] Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 87.

[289] Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 99.

[290] Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 87 and 94.

Legitimate reasons for the *size* of departure in relation to each WACC parameter: Is the quantum of the adjustment to each parameter (including any overall WACC uplift) justified?

- What evidence is provided to support the quantum? (For example, quantitative analysis demonstrating firm-specific difference from our benchmark value, evidence from academic articles, or other regulatory decisions?). Note: the onus is on airports to provide evidence/sufficient reasoning on any relevant factors.[291]
- Are there counter-arguments (or other off-setting considerations) which would reduce the size of the adjustment made by the airport? (For example, consider whether arguments made by the other regulated New Zealand airports would work in the opposite direction for the specific airport in question).
- Is the evidence/reasoning sufficient to support the value of the adjustment made to our benchmark value considering the Part 4 purpose (particularly the section 52A(1)(d) requirement to limit the ability of airports to earn excessive profits)?
- **If the evidence/reasoning is not sufficient, then we consider the airport-specific adjustment to that parameter is unjustified.**

Legitimate reasons for departure in relation to overall target return: Is the airport's overall target return reasonable?

- Are there any additional factors relevant to the airport's overall target return (for example, off-setting considerations regarding other parameters)?
- **If each of the individual parameter adjustments are acceptable, and there are no other off-setting considerations, then we consider that airports have legitimate reasons to target returns above the mid-point.**
- **However, if there are some adjustments we consider not sufficiently justified (or there are other off-setting considerations), then the target return is unjustified.**

Submissions on the framework for assessing airport target returns

A18 We received a number of submissions on our application of the revised framework and our interpretation of the framework set out as part of the IM Review. Given the framework is applied to assessing returns across all airports, we have referred to submissions on both the Auckland Airport and Christchurch Airport draft reports in this section.[292]

A19 In particular, NZ Airports and other airport submissions suggested that:

[291] Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 99.

[292] Commerce Commission "Review of Auckland International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (26 April 2018); Commerce Commission "Review of Christchurch International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (19 July 2018).

A19.1 We had not sufficiently taken into account the context of Auckland Airport's decision on its target return and had narrowly focussed on WACC parameter values;[293]

A19.2 The evidentiary burden required to justify a departure from the mid-point is too onerous and has resulted in the mid-point becoming a bright line benchmark;[294]

A19.3 Too much focus has been placed on profitability and not the wider performance of airports;[295]

A19.4 We should provide more information of the performance of airports over time and make it clear that there has not been a 'backwards step' since PSE2.[296]

A20 We consider these points below.

The role of our mid-point WACC estimate and the appropriate evidentiary burden when considering target returns

A21 We agree with the submissions that note how our mid-point WACC estimate is not intended to be a bright line.[297] We explicitly stated in the IM Review that we consider there may be legitimate reasons for an airport to target returns that are different to our mid-point WACC estimate. However, we also noted that:[298]

> …the key consideration for us when assessing the appropriateness of an airport targeting returns above the mid-point estimate is the extent to which it promotes the long-term benefit of consumers. Any reasoning for setting a targeted return above the mid-point needs to consider this purpose.
>
> …the airports will be required to provide information and evidence to explain those reasons to interested parties. This explanation will then be considered in light of the s 52A(1)(d) requirement to limit the ability of airports, as regulated suppliers, to earn excessive profits.

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293 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 10; Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 49.

294 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 78f; NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 31 (b).

295 Wellington Airport "Response to Draft report on Auckland Airport's PSE3 Pricing" (29 May 2018), pages 1-2.

296 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraphs 41-42.

297 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 9; Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 20.

298 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraphs 59, 94, and 132.

> We also expect greater explanation, reasoning and evidence to be required as any divergence from the mid-point increases. Such reasoning and evidence should be specific to the circumstances of the airport or specific project at the time of the estimate. Relying on generic arguments concerning other airports or other time periods will not be considered sufficient, in our view.

A22 As noted in the IM Review, section 52T(1)(a)(i) requires the input methodologies relating to a particular good or service to include an IM for the cost of capital. Airports do not have to apply the cost of capital established under the cost of capital IM for airports (section 53F(1)). However, we can use the cost of capital IM to "monitor and analyse" information made available by regulated suppliers (section 53F(2)(a)).[299]

A23 As also noted in the IM Review, we consider that our mid-point WACC represents our starting point when assessing airports' profitability, but we will also consider whether each airport has legitimate reasons for targeting a different return to our mid-point WACC estimate. [300]

A24 A degree of judgement is required when determining target returns. However, we consider that any judgement which results in targeted returns above our mid-point WACC estimate needs to be supported by evidence. As quoted in paragraph A21 above, the onus is on airports to provide sufficient evidence to support any judgement calls they have made, in light of the Part 4 purpose statement.

A25 BARNZ submits, in their cross-submission on the Christchurch Airport draft report, how care needs to be taken when considering the impact of this uncertainty when assessing target returns:[301]

> The airports are correct that WACC estimates are uncertain. But they are seeking to use that uncertainty to create an environment where excessive profits become easier to extract. Auckland Airport and NZ Airports' Association appear to want to see the reintroduction of a WACC range. The effect of this, of course, would be that all of the regulated airports would then set prices based on a WACC set at the top of whatever range the Commission determines. This would mean consumers would consistently pay prices above the best estimate of the cost of capital. This consumer harm is why the previous WACC range was criticised by the High Court and then removed by the Commission.

A26 We outlined in our draft report how we had not been persuaded by the evidence provided by Auckland Airport to explain its higher target return.[302] More explicitly, we had not been persuaded that the reasons given in Auckland Airport's pricing disclosure (ie, the argument that an increase in capital expenditure leads to an

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299 Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 52.

300 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 87.

301 BARNZ "Draft Report on Christchurch Airport's PSE3 pricing - cross-submission" (6 September 2018), paragraph 9.

302 Commerce Commission "Review of Auckland International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (26 April 2018), paragraph 102.

increased operating leverage and a higher asset beta) explained the magnitude of the increase in the asset beta, and therefore the cost of equity.

A27 The draft report provided an opportunity for more evidence to be provided that could change that view. This has been characterised by some submissions that a certain evidential threshold needs to be met.[303] We consider that it is wrong to interpret the framework in this way. We do not consider a specific evidence threshold (empirical or otherwise) needs to be passed. Consultation on the draft report did, however, provide Auckland Airport with an opportunity to provide more evidence to explain its targeted return.

A28 We consider that NZ Airports view that 'extensive empirical evidence' to justify small deviations from the WACC IM overstates the evidentiary burden on airports under our framework:[304]

> NZ Airport's concern is that the Commission's requirement for airports to provide extensive empirical evidence to justify the reason for, and size of, each deviation from individual WACC IM parameters means that, in practice, little or no flexibility is provided to consider airport specific context.

A29 We stated in the draft report that empirical evidence would be useful,[305] but given the uncertainties associated with asset beta estimates, any empirical data would also be considered together with other forms of evidence and reasoning provided by the airport.

A30 NZ Airports also state that:[306]

> Our concern now is that the Commission's assessment framework in fact increases the focus on WACC IM values (particularly the WACC IM mid-point), as discussed below. NZ Airports submits that to avoid this risk, instead of primarily focussing on technical parameter adjustments, the Commission's assessment of expected profitability must more carefully consider and assess the judgement that airports must reasonably exercise when estimating an airport-specific WACC and target return.

A31 We agree that any assessment should consider judgement that airports exercise in estimating WACC and setting a target return. However, any assessment of contextual factors ultimately has to consider how those factors impact the target return that that has been chosen. Our framework focusses on the impact of contextual or airport-specific factors on individual WACC parameters to enable greater clarity when assessing the evidence provided.

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303 NZ Airports "Cross-submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (26 June 2018), paragraph 21 (b).

304 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 61.

305 Commerce Commission "Review of Auckland International Airport's pricing decisions and expected performance (July 2017 – June 2022) - Draft report" (26 April 2018), paragraph 107.

306 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 44.

A32 We note that BARNZ make a similar point in their cross-submission.[307]

> We think these views overlook what the Commission's assessment framework does. From our reading of the Draft Report, the Commission clearly understands AIAL's logic and rationale for a higher WACC. However, having understood the rationale, it must be tested. Ultimately the way to test it is to consider whether the case put forward (ie that higher capex leads to higher operating leverage, which justifies an asset beta 0.08 higher than the Commission's estimate) stands up to scrutiny. The best way to do this is to consider whether the evidence supports a beta uplift of that size.

A33 Overall, we consider the approach we have taken to assessing the evidence provided by Auckland Airport is consistent with the approach outlined as part of the IM Review.

Assessment of profitability

A34 The overall performance of airports depends on a number of aspects of the business, for example, quality and operating expenditure efficiency.[308] However, we put a significant focus on airport profitability because it is a key aspect of overall performance.

A35 Airports are able to set prices as they see fit,[309] however changes to our information disclosure regime are likely to have influenced their behaviour to some extent. Airports are now required to explain any differences from our mid-point WACC estimate. Previously their target return was assessed against a reasonable range, with the 75th percentile as the top of the range.

The evolution of the regime

A36 NZ airports suggested we should provide more information on the performance of airports over time and make it clear that there has not been a 'backward step' compared to previous price setting events.[310]

A37 Under the information disclosure regime, the onus is on airports to provide sufficient reasoning as to why their targeted returns for PSE3 may be different to the mid-point WACC estimate, which we publish in advance. Any reasoning needs to consider the long-term benefits of consumers. [311]

A38 This differs to our previous review of Auckland Airport's prices for PSE2, where the upper limit of our WACC range (the 75th percentile) effectively represented the key benchmark when assessing airport profitability. Auckland Airport's expected returns have reduced from the 75th percentile of our WACC range in PSE2 to the 67th

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307 BARNZ "Cross-submission on Draft Report on AIAL's PSE3 pricing decision" (26 June 2018), paragraph 6.

308 These aspects of performance are considered separately in Chapter 3 and Attachment B.

309 Airport Authorities Act 1966, Section 4A.

310 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 41.

311 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraphs 59 and 97.

percentile in PSE3 for overall returns and from the 83rd to the 65th percentile for returns on priced services.[312]

A39 Although not a focus of our review, this suggests that the extent to which the information disclosure regime limits Auckland Airport's ability to extract excessive profits has increased from PSE2 to PSE3. This has been achieved without limiting airports ability to target returns to reflect higher levels of risk in circumstances in which it can be justified, as discussed above.

Other important factors to consider in assessing an airport's target return

A40 Two other important contextual aspects are the significance of the dual till in assessing target returns and ensuring consistency across airports and over time.

The significance of dual till in assessing target returns

A41 Air New Zealand and BARNZ agreed with our view that airports can earn significant revenue from unregulated complementary activities, and this should be recognised when determining an appropriate return from aeronautical activities.[313]

A42 Air New Zealand have previously noted that considering aeronautical returns in isolation from overall airport returns is an artificial construct, and does not reflect the practice of markets which will be assessing airport performance on the basis of total returns (and making investment decisions accordingly).[314]

> Auckland Airport submitted that the dual till does not 'automatically provide mitigation for the risks and potential social costs of underinvestment'[315]

A43 NZAA submitted:[316]

> It appears that the Commission's view on the impact of the dual till is a key reason why the Commission is reluctant to consider whether a WACC higher than its mid-point can provide long-term benefits for consumers – including passengers. That is, it believes that the incentives arising from the non-regulated business mean that it does not need to be concerned about whether its WACC IM mid-point underestimates the true WACC for each airport, such that investment that benefits passengers in the long-term could be put at risk.

A44 We do not consider that the dual till automatically provides mitigation against the costs of underinvestment. However, we agree with Air New Zealand and BARNZ that the dual till approach can be relevant when assessing target returns. For example, we

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312 The 83rd percentile was for priced services in PSE2 was not published at the time but can be estimated from Auckland Airport's disclosed return of 8.5% on priced services and our April 2012 mid-point WACC estimate of 7.06%.

313 Air New Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), pages 2-3; BARNZ "Cross-submission on Draft Report on AIAL's PSE3 pricing decision" (26 June 2018), paragraphs 17-18.

314 Air New Zealand "Response to the Process and Issues Paper: Auckland and Christchurch Airports' third price setting events (July 2017-June 2022)" (28 November 2017), paragraph 20.

315 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 135.

316 NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 26.

stated in the IM Review that we consider that the case for providing an uplift above our mid-point estimate to mitigate the risk of underinvestment is significantly weaker for airports than for energy businesses. In particular, we noted that airports:[317]

A44.1 are subject to a dual till structure (where they can earn significant amounts of revenue from unregulated complementary activities) – this means that aeronautical investments are likely to take place even in instances when the regulated return is too low if the difference can be made up from complementary unregulated revenue streams;

A44.2 have regular consultations with a small number of engaged customers – this engagement protects against underinvestment because airlines can identify investment that they are willing to pay for (which is likely to be the majority of efficient investment in regulated airport services); and

A44.3 there could be other regulatory requirements, such as safety, that result in the investment being made.

A45 Although complementary revenue streams are unregulated, they can directly impact incentives to invest in regulated services. Therefore, we noted in the IM Review that:[318]

> When we are assessing airports under the ID regime and considering whether it is in the long-term interest of consumers to increase returns above the mid-point WACC, it is highly relevant that we understand the actual risk of under-investment.

A46 This approach seems consistent with Auckland Airport's view that:[319]

> We think that [a dual till regime] creates better investment incentives than a single till regime for both the aeronautical and non-aeronautical business, and that it is more consistent with promoting aeronautical investment in the long-term interest of consumers than a single till approach.

A47 Consequently, we consider that the most appropriate approach is to recognise that airports are dual till when assessing their target returns, where relevant.

Consistency in approach between airports and over time

A48 BARNZ is concerned that the regulatory framework is producing a situation where each airport finds its own reason to justify an uplift, but those reasons are not consistent over time or with each other.[320]

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317 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 139.

318 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 145.

319 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 136a.

320 BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), table 4, row 18.

A49 We agree that it is important to consider consistency between airports' rationale for their target returns. As indicated in our framework above, we intend to consider whether each airport has applied consistent logic over time, and whether there are any off-setting considerations which would reduce airports' target returns. This includes considering arguments other airports have made when setting their target returns.

A50 NZ Airports suggested that this may imply airports should coordinate their pricing decisions in advance of them being made or undertaking an analysis of all the differences and similarities between each airport.[321]

A51 For the avoidance of doubt, we are not suggesting that airports should coordinate pricing decisions in advance. As noted above we would expect consistency in pricing decisions by an individual airport over time and consideration of any off-setting factors. We would also expect airports to consider factors which have been used by other airports to explain a departure from our mid-point estimate and which we have considered in any previous assessments of price setting events.

Assessment of Auckland Airport's target return

Auckland Airport's target return for priced services is 6.99%

A52 Auckland Airport has set a target return for priced services of 6.99%, which is equivalent to the 65th percentile of our WACC range estimated as at 1 April 2017.[322]

A53 When determining its target return, Auckland Airport used a WACC range of 6.85% to 8.1%. The overall range was constructed using two main estimates of the Auckland Airport-specific WACC:

A53.1 Auckland Airport's expert advisor, NERA, recommended a range of 7.5% to 8.1%. Auckland Airport states that it considers this to be "the best evidence" of its forecast WACC for PSE3.

A53.2 Auckland Airport's own cross-checks using our WACC methodology, with their adjustments, led to a WACC range of 6.85% to 7.55%. This range was determined using our WACC estimate as at 1 April 2017 (6.41%), adjusted for Auckland Airport's expected cost of debt of 4.52% (instead of 4.41%) and an asset beta range of 0.66 to 0.76 (instead of 0.60).[323]

A54 Auckland Airport determined its target return of 6.99% by choosing a point estimate within the range using judgement, rather than explicitly determining specific values

[321] NZ Airports "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018), paragraph 76.

[322] When the expected returns from other regulated services are included, the overall expected return is 7.06%, which is equivalent to the 67th percentile of our range.

[323] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 8.

for each parameter. Auckland Airport noted that it did not seek "to target any particular percentile of the Commission's regulatory WACC estimate".[324]

Auckland Airport's reasons for targeting above the mid-point WACC estimate

A55 Auckland Airport's pricing disclosure indicates that there are two main reasons why it targeted a WACC higher than our mid-point WACC estimate.

A55.1 Auckland Airport considers it has a higher cost of equity than our mid-point WACC estimate, due to greater exposure to systematic risk arising from high levels of operating leverage. Auckland Airport states that its operating leverage has been higher than the companies in our asset beta comparator sample historically, and this gap is expected to widen due to the large capital expenditure forecast during PSE3.[325]

A55.2 Auckland Airport has used its own forecast cost of debt for PSE3 of 4.52%, instead of our benchmark of 4.41%.

A56 Auckland Airport states that its target return will help support its capital expenditure plan, and therefore is appropriate to deliver long-term benefits to consumers.

Auckland Airport's approach to determining its target return is vague

A57 As noted above, Auckland Airport has chosen its target return of 6.99% by selecting a point estimate within a relatively wide range of 6.85% to 8.1%. The decision to use 6.99% was a judgement call, and individual WACC parameter values were not provided in the pricing disclosure. For example, Auckland Airport stated:[326]

> As the approach we have taken to determine our target return relies on the exercise of judgement after considering a range of factors and data points, we have not sought to calculate a risk-free rate at any particular date. We consider it is reasonable for Auckland Airport to exercise its judgement with reference to the contextual factors and data points noted above, including the most recent published Commission WACC estimate.

A58 In our view, this approach is inconsistent with the expectations set in the 2016 IM Review. We were clear in the IM Review that we now require airports to provide evidence to explain differences between their WACC and our estimate of the WACC. For example, we stated:[327]

> Airports will now be required to submit evidence that provides an explanation for differences between their WACC and our estimate of the WACC; and their targeted return and their WACC. The onus, therefore, is on the airports to provide sufficient reasoning why their targeted returns may happen to be above the regulatory WACC. As we note above in

[324] Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 33.

[325] Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 69b.

[326] Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 33.

[327] Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 99.

paragraph 87, our starting point for profitability analysis will be the mid-point WACC while remaining open to reasons and evidence for why returns should be above or below this.

A59 By not providing its own alternative estimates of key WACC parameters such as asset beta, Auckland Airport has not clearly explained differences between its WACC and our estimate of WACC. We consider that the specific magnitude of adjustment to each parameter is an important factor when considering whether the airport's approach is justified.

A60 Auckland Airport's approach also appears to have caused confusion amongst interested parties. For example:

A60.1 Based on Auckland Airport's pricing disclosure, Air New Zealand understood that Auckland Airport had applied a tax adjusted market risk premium (TAMRP) of 7.25%, and commented on this in its submission.[328]

A60.2 We consider this was a reasonable assumption, given Auckland Airport's pricing disclosure stated "[u]ltimately, we consider that a market risk premium of 7.25% is appropriate to use when developing our best estimate of our Auckland Airport-specific WACC".[329]

A60.3 However, in its cross-submission on our Process and issues paper, Auckland Airport provided further details regarding the cross-checks it undertook using our WACC methodology. It noted that "the two criticisms raised by Air New Zealand in its submissions (the use of a TAMRP of 7.25% and the use of a "total business" asset beta rather than applying a downwards adjustment) do not underpin our target return selection for PSE3".[330]

A61 Further, although Auckland Airport commissioned an expert report from NERA to assist in setting its target return, this was not initially provided to us as evidence to support the pricing disclosure. Given Auckland Airport considers NERA's WACC range to be "the best evidence of Auckland Airport's forecast WACC for PSE3", we would have expected this would have been provided as evidence to support its pricing disclosure.[331]

A62 Both Auckland Airport and NERA have emphasised operating leverage as the main reason for Auckland Airport's higher asset beta and subsequently used the observed asset beta of Auckland Airport to determine the magnitude of the adjustment. However, in our view the observed asset beta is likely to be:

328 Air New Zealand "Response to the Process and Issues Paper: Auckland and Christchurch Airports' third price setting events (July 2017-June 2022)" (28 November 2017), paragraph 18.

329 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

330 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 8.

331 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 29.

A62.1 subject to significant estimation errors, given single company estimates can be unreliable;

A62.2 subject to factors unrelated to operating leverage; and

A62.3 heavily influenced by the expected returns on unregulated services.

A63 There appears to be a limited connection between reasons provided by Auckland Airport for a higher asset beta and the final parameter value used in the price setting. This lack of a clear connection makes it difficult for stakeholders to understand the reasoning and logic provided by Auckland Airport.

A64 In response to our draft report, we consider that limited further information was provided by Auckland Airport on why its particular target return was chosen. The majority of information provided focussed on using a number of reasons (including some not mentioned in the original price setting disclosure) to justify why its target return was reasonable, rather than explaining further the original rationale for setting it at a particular level in the first place. [332]

A65 This may be a subtle distinction but we consider it is important given the context of the information disclosure regime. There is a requirement to explain to stakeholders the reasons for any deviation from our mid-point WACC estimate and why that is in the long-term interests of consumers. However, we recognise this is a 'new' regime following the changes made in 2016 following the IM Review.

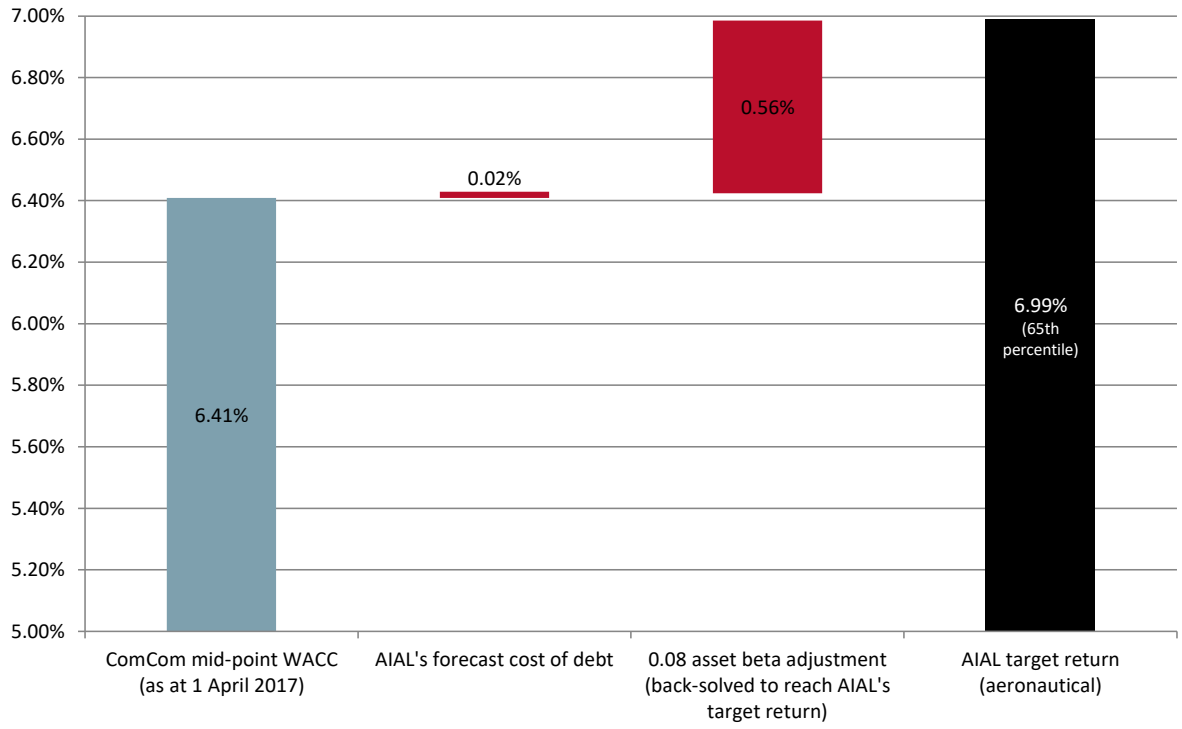
We have estimated the materiality of parameter adjustments made by Auckland Airport

A66 Although Auckland Airport does not provide a specific value for its estimate of the asset beta (reflecting its expected increase in operating leverage), the value can be back-solved within our WACC framework. Assuming Auckland Airport's cost of debt of 4.52%, but holding all other parameter values from our 1 April 2017 WACC estimate constant (except asset beta), an asset beta of 0.68 is needed to reach Auckland Airport's target return of 6.99%. This is compared to our benchmark asset beta of 0.60.

A67 The materiality of Auckland Airport's adjustments is demonstrated in Figure A1 below. This shows that the *implicit* adjustment to asset beta consistent with a target return of 6.99% is the most material change relative to our mid-point WACC estimate.

[332] For example, Auckland Airport's submission on the draft report suggests using a higher asset beta because it has a higher proportion of long-haul passengers. Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 120.

Figure A1 Waterfall chart showing the difference between our mid-point WACC and Auckland Airport's target return



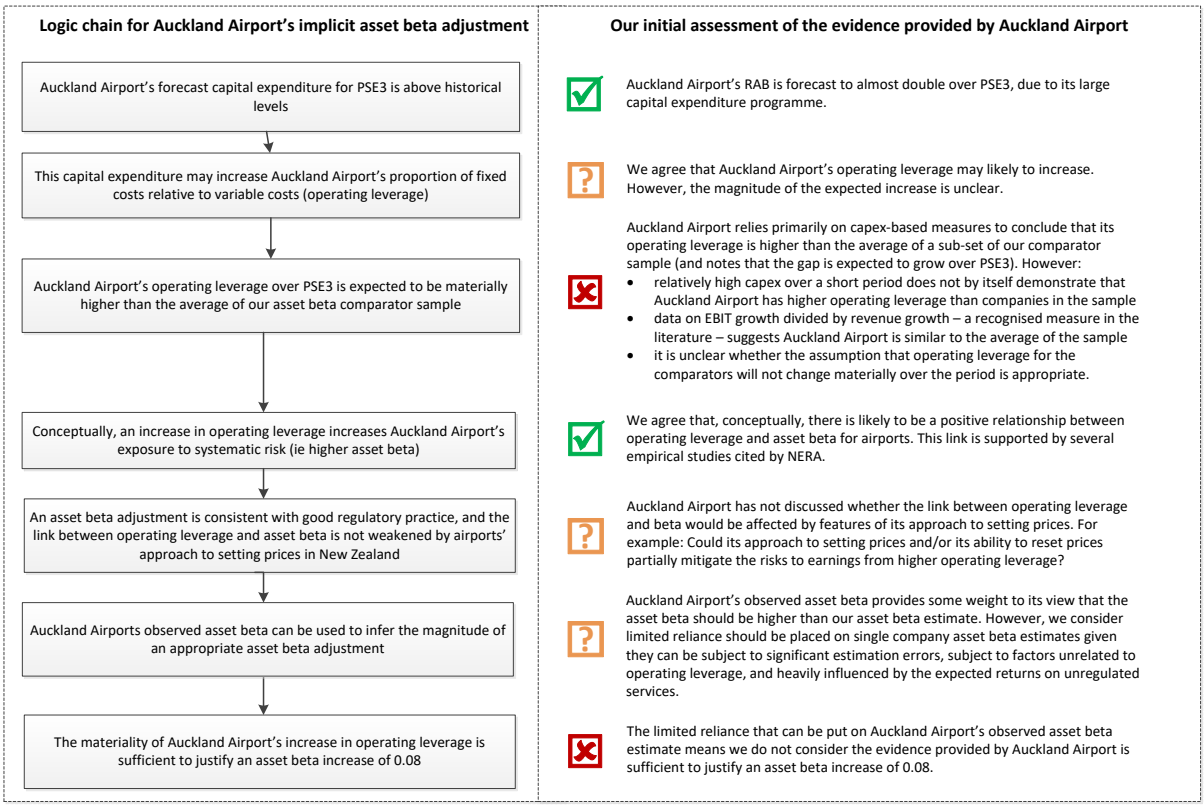
A68 The sections below discuss our assessment of Auckland Airport's approach to setting its target return. Cost of equity is discussed first, followed by the cost of debt, and finally we consider the overall target return.

Our assessment of Auckland Airport's approach to the cost of equity

A69 When considering the cost of equity, we have focussed on the adjustment to asset beta from 0.60 to 0.68 that is implicit in Auckland Airport's target return of priced services of 6.99%.

A70 Specifically, we have considered whether Auckland Airport has legitimate reasons to depart from our asset beta estimate, which was based on a sample of 26 international comparator companies. Our initial assessment of the evidence provided by Auckland Airport is summarised in Figure A2 below.

Figure A2 Summary of our assessment of Auckland Airport's implicit asset beta adjustment



A71 Auckland Airport does not appear to have focussed on explaining the differences in its target return with reference to the mid-point WACC estimate when considering an appropriate cost of equity.[333]

When we set prices, Auckland Airport did not seek to separately quantify a sectorwide asset beta "uplift" to account for this expected increase in operating leverage (either to our own historic asset beta estimates, or to the comparator sample average). Rather, we considered that the forecast increase in operating leverage provided more support for the use of recent and direct measures of Auckland Airport's systematic risk to inform our target return rather than reference to the Commission's global sample set – and provided clear support for setting a target return informed by the factors affecting Auckland Airport's risk profile at this stage of our capital cycle.

333 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 78 d.

A72 However, we consider that it was clear from the IM Review that we expected that any rationale for a higher target return to be explained with reference to the mid-point WACC estimate, given it is our starting point for profitability assessment:[334]

> We consider the mid-point WACC represents our starting point when assessing returns for profitability analysis. However we continue to consider that there may be legitimate reasons for an airport to target returns that are different to our mid-point WACC estimate and, as mentioned in paragraph 80.3, we now require airports to provide evidence to explain such differences. This too will form part of such an assessment.

A73 There were significant amounts of analysis and consultation that preceded the setting of our mid-point WACC estimate and our WACC methodology has been subject to merits appeals through the High Court. We therefore consider significant weight should be put on this estimate as a starting point for assessing airport target returns and any explanation for a higher target return should be with reference to this starting point.

A74 We also briefly discuss Auckland Airport's views regarding the TAMRP.

Does Auckland Airport have legitimate reasons for adopting a higher asset beta?

A75 Following advice from NERA, Auckland Airport considered "it was appropriate to develop an Auckland Airport-specific mid-point WACC estimate to inform the Aeronautical Pricing Decision that put greater emphasis on direct measures of Auckland Airport's systematic risk than the Commission's global sample set".[335]

A76 Although Auckland Airport did not provide a specific asset beta estimate, it highlighted several key points from NERA's advice in support of a higher beta as part of its price setting disclosure. These include:[336]

A76.1 Auckland Airport's historical operating leverage is higher than the Commission's sample set of comparator airports, used to determine its notional industry-wide asset beta. For example, Auckland Airport's capital expenditure per passenger and capital expenditure as a percentage of turnover (using FY2015 data) is higher than the companies in the Commission's comparator sample, for which capital expenditure performance is available through international performance benchmarking studies.

A76.2 Auckland Airport will face large cash outflows due to the large capital expenditure it is facing in PSE3, which cannot be scaled back or reversed easily in case of a material decrease in demand, and can therefore be

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334 Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 87.

335 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

336 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 26-28.

considered fixed. Auckland Airport is therefore expected to have higher operational leverage than in the past and relative to comparators which are not undertaking such large scale capital expenditure projects.

A76.3 The gap in operating leverage between Auckland Airport and the comparator sample is expected to widen over PSE3 as Auckland Airport's capital expenditure increases substantially relative to its historical investment levels. This increase in operational leverage leads to an increase in systematic risk (affecting asset beta) relative to Auckland Airport's historic baseline, as well as an increase relative to the companies used by the Commission in its sample airport comparators.

A76.4 Using the most recent estimates of Auckland Airport's asset beta is the best way to reflect the impact of Auckland Airport's forecast capital expenditure plan, and the increase in operating leverage that this will introduce over PSE3. An outdated Auckland Airport asset beta estimate or an estimate based on comparators' betas will not capture the risk Auckland Airport faces as a result of higher operational leverage during the period of investment that is substantially higher than its historical baseline and comparators' average investment.

A76.5 The link between the effect of higher capital expenditure on operational leverage and beta has been recognised by regulators elsewhere in the world, including the UK airport sector, where the UK Competition Commission has considered operational leverage as part of its assessment of relative systematic risk between Heathrow, Gatwick and other airports.

A77 We consider each of these points below.

Focus on operating leverage in the draft report

A78 Auckland Airport submitted in response to our draft report that:

> The draft report appears to suggest that the only legitimate rationale for Auckland Airport's target return to depart from the Commission's mid-point is if an "implied adjustment" to the comparator sample average beta can be supported due to projected increases in operating leverage for PSE3.

A79 We disagree that the only legitimate rationale for Auckland Airports to depart from the mid-point estimate is due to the impact of higher operating leverage. However, we focussed on operating leverage in the draft report as this was the main reason given for Auckland Airport in its pricing disclosure for having a higher cost of equity than our mid-point estimate.[337]

A80 Auckland Airport's submission on the draft report appears to reduce its focus on operating leverage and appears s to put more weight on the observed asset beta of

[337] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 26-28.

Auckland Airport as well as noting alternative reasons to explain a higher asset beta.[338]

Is Auckland Airport's historical operating leverage higher than the Commission's asset beta sample?

A81 NERA states that Auckland Airport's operating leverage is higher than a subset of the companies in our asset beta comparator sample, referring to data on capital expenditure per passenger and capital expenditure as a proportion of revenue. The table from NERA's report, which is based on 2015 data, is shown in Table A2 below.

[338] Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), Section 3.

Table A2 NERA table showing Auckland Airport's capital expenditure relative to comparator sample

Airport(s)[1]	Company in Commission's asset beta sample	Capex per pax (SDR)[2]	Capex as a percentage of turnover (%)	Average asset beta 2006-2016, using weekly and 4-weekly	Average asset beta 2011-2016, using weekly and 4-weekly
Beijing	Beijing Capital International	0.67	7.3	0.73	0.40
Tokyo Narita	Japan Airport Terminal Co Ltd	7.1	21.4	0.77	0.88
Aeroports de Paris	Aeroports de Paris	3.72	14.4	0.54	0.41
Auckland	Auckland International Airport	5.45	30.1	0.67	0.65
Airports of Thailand	Airports of Thailand PCL	1.75	20.5	0.88	1.14
ASUR	Gurpo Aeroportuario del Surest	1.28	11.2	0.65	0.71
Zurich	Flughafen Zuerich AG	7.13	27.9	0.57	0.57
Vienna	Flughafen Wien AG	2.71	14.5	0.40	0.27
Fraport	Fraport AG Frankfurt Airport Services	3.73	28.5	0.56	0.40
GAP	Grupo Aeroportuario del Pacifico	1.25	12.6	0.66	0.62
Delhi	GMR Infrastructure Limited	0	0	0.67	0.45
Copenhagen	Kobenhavns Lufthavne	4.29	25.1	0.31	0.31
Malaysian Airports	Malaysia Airports Holdings Bhd	0.34	6.3	0.84	0.96
Sydney Airport	Sydney Airport	3.83	22.8	0.36	0.23
Average		3.09	17.33	0.62	0.57
Auckland Airport (as at year end FY15 for capex data)		5.45	30.1	0.67	0.65

Source: LeighFisher Airport Performance Indicators 2016; Notes: [1] This table shows the companies that appear in the Commission's comparator sample for which capex performance data is available through international performance benchmarking studies. The companies shown represent over half of the Commission's comparator sample set (14 out of 26). [2] LeighFisher uses Special Drawing Right (SDR) rates as a unit of comparison for capex per passenger between airports, where the capex per passenger in each airport's local currency is converted into SDR. The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves and is based on a basket of five major currencies—the U.S. dollar, euro, the Chinese renminbi (RMB), the Japanese yen, and pound sterling. Source: http://www.imf.org/external/np/exr/facts/sdr.htm

A82 However, NERA and Auckland Airport appear to have conflated higher capital expenditure and higher operating leverage. Although Table A2 shows that Auckland Airport had relatively high levels of capital expenditure in 2015, in our view this does not mean that it has higher operating leverage than the companies in the comparator sample.

A83 Operating leverage measures the proportion of fixed costs to total costs. We acknowledge that sustained high capital expenditure levels over time may be expected to increase operating leverage. However, high capital expenditure in a single year does not necessarily mean high operating leverage, because it gives no

indication of the size of the asset base to which the capital expenditure is added, or the proportion of fixed vs variable costs more generally.

A84 The fact that Auckland Airport's capital expenditure is increasing, and was higher than the comparators in 2015, does not by itself demonstrate that it will have higher operating leverage than our comparator companies during PSE3. This will depend on Auckland Airport's historic operating leverage relative to the comparator sample, and the expected levels of capital expenditure for the comparator companies over the period.[339]

A85 BARNZ submitted that many other airports in the comparator sample are making/or planning to makes substantial capital investments over the next 5-10 years. Therefore it is not clear that Auckland Airport's increased capital expenditure (and any impact on operating leverage) will be materially different to the sample.[340]

A86 In response Auckland Airport submitted that it is not relevant whether Auckland Airport's capital expenditure will be in line with the Commission's sample set forecast over PSE3. It considers that forward-looking estimates of capital expenditure are not relevant when the asset beta is estimated from historical data.[341]

A87 We do not consider this point is as clear-cut as Auckland Airport suggest. Expectations of future capital expenditure could potentially affect asset beta many years before the expenditure takes place. In addition, some high levels of expenditure in the past (at specific airports) may have affected historical asset beta estimates, but are not included as part of future capital expenditure forecasts. As previously noted, the important consideration is how Auckland Airport's operating leverage differs from the comparator sample.

A88 To get a more accurate picture of the Auckland Airport's operating leverage relative to the comparator sample, we have collected data on the "degree of operating leverage", sourced from Bloomberg, for each of the companies in the comparator sample.[342] The degree of operating leverage is measured as:[343]

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339 NERA notes its expectation that the gap in operating leverage between Auckland Airport and the comparators will widen assumes that "the capital expenditure programmes of the Commission's beta comparators do not change materially". NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 7.

340 BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), paragraphs 27-28 and Appendix.

341 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: cross-submission on the draft report" (26 June 2018), paragraph 10f.

342 We used the Bloomberg "DEGREE_OPERATING_LEVERAGE" field. Bloomberg notes that: "Operating leverage involves using a large proportion of fixed costs to variable costs in the operations of the firm. The higher the degree of operating leverage, the more volatile the EBIT figure will be relative to a given change in sales, all other things remaining the same."

343 Bloomberg notes that its degree of operating leverage ratio "will return a negative value if EBIT percentage change and sales percentage change are both negative". Bloomberg appears to have added the negative sign to assist with interpretation of the data, the degree of operating leverage formula would ordinarily return a positive value where a negative value is divided by a negative value. For simplicity, we have reported Bloomberg's data without any adjustments.

$$Degree\ of\ operating\ leverage = \frac{\%\Delta EBIT}{\%\Delta\ revenue}$$

A89 Earnings before interest and taxes (EBIT) growth divided by revenue growth is a recognised measure of operating leverage. For example, Professor Damodaran notes that (emphasis added):[344]

> …it is difficult to measure the operating leverage of a firm, at least from the outside, since fixed and variable costs are often aggregated in income statements. **It is possible to get an approximate measure of the operating leverage of a firm by looking at changes in operating income as a function of changes in sales.**
>
> For firms with high operating leverage, operating income should change more than proportionately, when sales change.

A90 Academic articles investigating the link between operating leverage and beta have also used a similar approach to measuring operating leverage. For example, the articles below were cited by NERA during the pricing consultation with airlines to support its view that "companies with high operating leverage tend to have high betas".[345]

A90.1 Lord (1996) noted that the degree of operating leverage "usually is defined as the ratio of the percentage change in earnings-before-interest-and-taxes (EBIT) to the percentage change in unit sales".[346] He referred to this expression of the degree of operating leverage as being based on the "standard textbook" presentation, but noted that "dollar sales are often employed in the proxy for DOL [degree of operating leverage] rather than unit sales".[347]

A90.2 Mandelker and Rhee (1984) noted that "the degree of operating leverage … is measured by the percentage change in [EBIT] that is associated with a given percentage change in the units produced and sold".[348]

A90.3 Beneda (2003) defined operating leverage as the percentage change in operating income divided by the percentage change in sales. She noted that "a company that has high operating leverage (high fixed costs relative to total costs) will also have higher variability in earnings before interest and

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344 Aswath Damodaran "Estimating risk parameters", pages 24-25.

345 NERA "Target Return and WACC for Auckland Airport – Response to John Small Paper" (23 May 2017), page 5, footnote 8.

346 Richard Lord "The Impact of Operating and Financial Risk on Equity Risk" (1996) *Journal of Economics and Finance volume 20 number 3 fall 1996*, page 30.

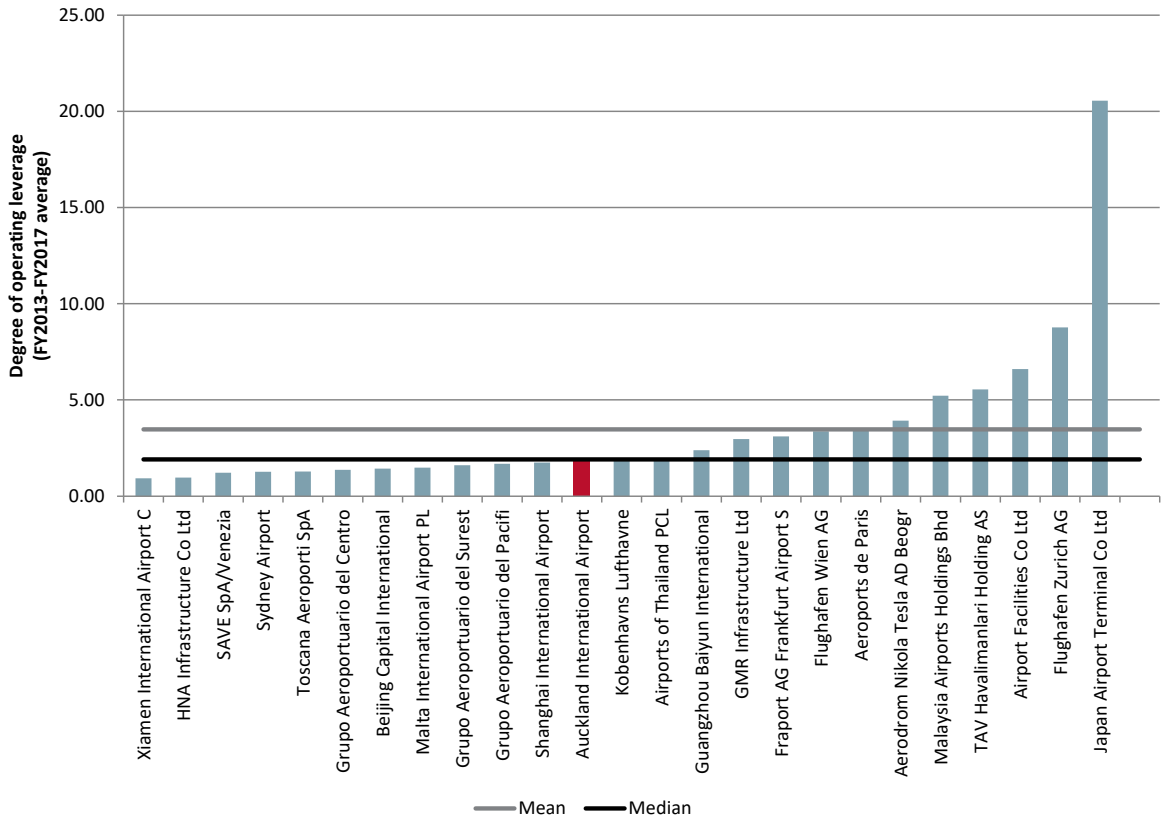
347 Lord noted that this is because "[m]any firms do not manufacture a single product, nor are figures on unit output available in standard accounting data". Richard Lord "The Impact of Operating and Financial Risk on Equity Risk" (1996) Journal of Economics and Finance vol. 20, no. 3, page 37, note 7.

348 Gershon N. Mandelker and S. Ghon Rhee "The Impact of the Degrees of Operating and Financial Leverage on Systematic Risk of Common Stock" (1984) Journal of Financial and Quantitative Analysis vol. 19, no. 1, page 49.

taxes than a company producing a similar product with low operating leverage".[349]

A91 Figure A3 below displays data on the degree of operating leverage, sourced from Bloomberg, for the companies in the asset beta comparator sample.[350] This shows that, when averaging over the five-year period from FY2013 to FY2017, Auckland Airport's degree of operating leverage (1.91) was the median of the comparator sample, but significantly below the mean (3.47).

Figure A3 Degree of operating leverage for firms in the asset beta comparator sample (FY2013-FY2017 average)

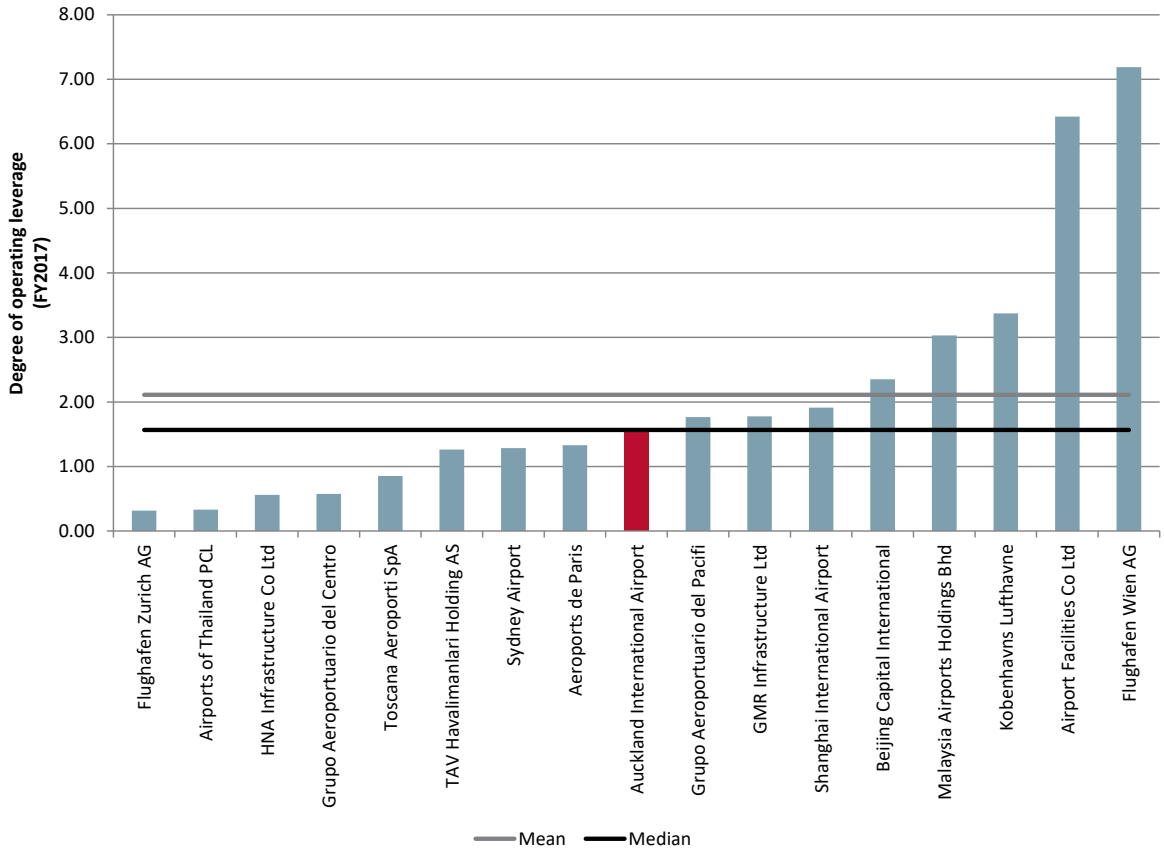


349 Nancy Beneda "Estimating Cost of Capital Using Bottom-up Betas" (May 2003), page 3.

350 25 of the 26 comparator companies are included. Shenzhen Airport Co Ltd is the only company that is excluded, due to lack of data.

A92 When focussing on FY2017 data alone, Auckland Airport's operating leverage (1.57) is again the median of the sample, but below the mean (2.11). This is shown in Figure A4 below.[351]

Figure A4 Degree of operating leverage for firms in the asset beta comparator sample (FY2017)



A93 The Bloomberg data in Figure A3 and Figure A4 includes a greater number of comparator companies than the data presented by NERA in Table A2 above. The FY2013-FY2017 data in Figure A3 includes 25 of the 26 comparator companies and the FY2017 data in Figure A4 includes 17 companies. However, NERA's data included only 14 of the 26 comparator companies.

A94 Although we consider the Bloomberg data provides a better measure of operating leverage than the capital expenditure-based proxies reported by NERA, we acknowledge it has some limitations. In particular:

A94.1 there can be significant variation in a firm's degree of operating leverage from year-to-year, due to generally accepted accounting principles (GAAP) requiring inclusion of certain potentially material items in EBIT that are

[351] Bloomberg only reports data for 17 of the 26 airports for FY2017. Guangzhou Baiyun International, SAVE SpA/Venezia, Xiamen International Airport, Malta International Airport PL, Grupo Aeroportuario del Surest, Fraport AG Frankfurt Airport, Aerodrom Nikola Tesla AD Beogr, Japan Airport Terminal Co Ltd, and Shenzhen Airport Co Ltd returned blank values.

unrelated to airport volume (such as changes in the fair value of derivative positions, shares in the profit or loss of associate companies, and write-downs of asset values); and

A94.2 the underlying EBIT and revenue data is measured for the 'whole of business', rather than focussing on regulated aeronautical activities.

A95 We have re-estimated Auckland Airport's degree of operating leverage based on an measure of underlying EBIT, which excludes factors we consider are unlikely to be relevant to its proportion of fixed costs.[352] The adjustments we have made mirror adjustments Auckland Airport itself made in estimating its underlying profit as disclosed to investors, including in its annual reports.

A96 This underlying EBIT measure results in lower estimates of the degree of operating leverage, and reduces variation from year-to-year. Using the underlying EBIT approach, Auckland Airport's degree of operating leverage is 1.10 for the 2017 financial year, and the average across the 2013 to 2017 financial years is 1.16.

A97 Our analysis of operating leverage appears to be supported by NERA's updated report which illustrates that, using NERA's favoured measures of operating leverage, AIAL does not appear to have a higher historical operating leverage than the average of the comparator sample.[353]

A98 This is consistent with our analysis which suggests Auckland Airport's degree of historic and current operating leverage is below or, at best, similar to the average of the sample.

Will Auckland Airport have higher operating leverage due to its large capital expenditure in PSE3?

A99 Auckland Airport's asset base applicable to price setting is forecast to almost double over PSE3, from approximately $1.1b to $2.2b. NERA notes that:

A99.1 "[i]f a firm's capital expenditure increases, all else being equal, the proportion of total costs that are fixed are likely to increase, because capital expenditure programmes are typically difficult to scale back with changes in customer volumes";[354] and

A99.2 "Auckland Airport's operational leverage is expected to increase from an average of 8% (capex as a proportion of asset base) in PSE2 to 20% in PSE3".

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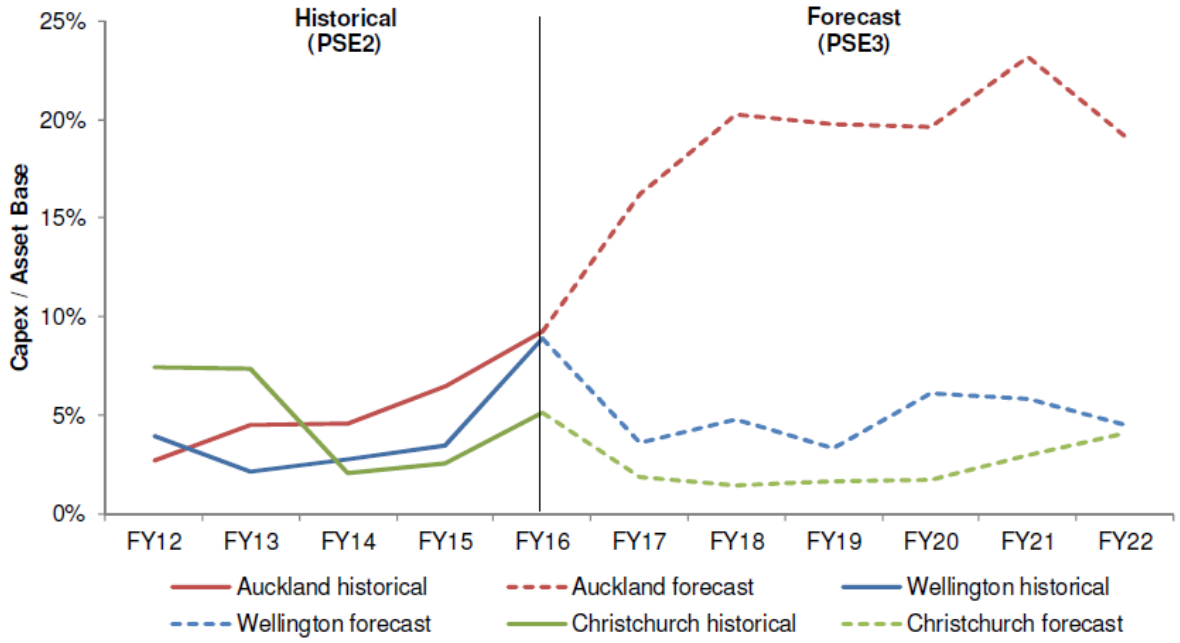
352 Specifically, our adjusted measure of EBIT excludes 'share of profit of associates', 'derivative fair value movement', 'investment property fair value increases', and 'property, plant and equipment revaluation decrease'.

353 See Fig 2.4 and 2.5

354 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 5.

A100 The increase in Auckland Airport's forecast capex is shown in Figure A5 below, which is reproduced from NERA's report.[355]

Figure A5 Auckland Airport's capital expenditure forecast relative to Christchurch and Wellington Airports



A101 Although Auckland Airport's asset base is to increase significantly during PSE3, estimating the impact on operating leverage is difficult as Auckland Airport has not separated out its costs into fixed and variable and as noted above we do not consider that increases in capital expenditure necessarily results in higher operating leverage.

A102 Auckland Airport notes that "operating leverage can be difficult to measure precisely" and it does not have an "Activity Based Costing model that categorises all of our historical and forecast costs as either fixed or variable on an annual basis".[356]

A103 We consider that Auckland Airport's operating leverage may increase during PSE3, due to its large capital investment programme. However, it is not clear to us that Auckland Airport's operating leverage over PSE3 will be materially higher than the average of the comparator sample, in a way that would meaningfully impact asset beta.

A104 Whether operating leverage will increase, and the extent to which it increases, is also very uncertain because there are a number of measures which have been raised by submitters as method of estimating forecast operating leverage.[357]

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355 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), figure 2.4, page 7.

356 Auckland Airport "Response to information request" (9 March 2018), page 1.

A105 We have estimated the forecast increase in Auckland Airport's capital costs (ie, return on and of capital) as a proportion of its forecast total costs over PSE3. Forecast total costs for priced assets are estimated by taking forecast depreciation, forecast operational expenditure, and forecast unlevered tax, then adding the forecast return on capital (calculated as the forecast asset base multiplied by the target return of 6.99%).

A106 As shown in Table A3 below, capital costs as a proportion of total costs are forecast to rise from 48% to 60% over PSE3, an increase of 23%.

Table A3 Auckland Airport's forecast costs over PSE3

	Pricing Period Starting Year 30 Jun 18	**Pricing Period Starting Year + 1 30 Jun 19**	**Pricing Period Starting Year + 2 30 Jun 20**	**Pricing Period Starting Year + 3 30 Jun 21**	**Pricing Period Starting Year + 4 30 Jun 22**
Forecast depreciation	48,591	55,755	72,792	84,838	90,948
Forecast operational expenditure	105,324	112,940	117,313	121,720	126,775
Forecast unlevered tax	41,438	39,708	36,422	36,978	37,639
Forecast return on capital	89,000	112,447	130,407	141,091	153,048
Forecast total costs	**284,353**	**320,850**	**356,934**	**384,627**	**408,410**
Capital costs as a % of forecast total costs	**48%**	**52%**	**57%**	**59%**	**60%**

A107 Consistent with the analysis above, we have estimated future EBIT and revenue as a proportion of total revenue and determined the forecast degree of operating leverage.[358] We have used data provided by Auckland Airport as part of the additional data request published with the draft report.[359]

[357] NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd"(29 May 2018), Section 2.3; BARNZ "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision (TDB Advisory)" (26 June 2018), Section 5.1.

[358] EBIT is calculated as Revenue – operating expenditure – regulatory depreciation + revaluations + gains on sale of assets.

[359] Auckland Airport "Response to information request – Appendix 1 – Operating Leverage (Public version)" (9 March 2018).

Table A4 Auckland Airport's Forecast operating leverage

	FY13	FY14	FY15	FY16	FY17
Forecast Revenue	230,429	247,990	265,855	290,471	326,213
EBIT	106,457	135,996	134,549	140,589	174,249
Degree of operating leverage		**1.68**	**-0.08**	**0.25**	**0.94**

	FY18	FY19	FY20	FY21	FY22
Forecast Revenue	334,356	350,537	365,277	382,692	401,786
EBIT	169,125	168,580	160,717	161,070	168,610
Degree of operating leverage	**-0.63**	**-0.03**	**-0.53**	**0.02**	**0.39**

A108 There appears to be a relatively weak relationship between revenue and EBIT (ie, low operating leverage).[360] In part this is a function of how the revenues are determined but on the whole the forecast change in operating leverage is minimal because forecast expenditure is largely unrelated to forecast revenues (over the 5 year period).

A109 NERA also suggested alternative proxies which can be used to estimate the possible change in operating leverage over PSE3. However, the alternative proxies referred to by NERA do not appear to have the same level of support in the literature as the EBIT growth/revenue growth measure described in paragraphs A88 to A90 above.

A110 NERA submitted that:[361]

> In light of regulatory precedent we review the two measures of operating leverage that are best capable of appropriately approximating the impact of capex on operating leverage, namely:
>
> ▪ Capex to RAB (used by Ofgem); and
>
> ▪ FCF to revenues (a variant on the measures used by the CMA and the CRE).

A111 We have analysed each of these measures to understand how they relate to operating leverage and the context in which they were used.

[360] We note that a forecast will underestimate actual changes in EBIT and revenue, but consider the size of EBIT as a proportion of revenue gives an indication of the magnitude of any change and how it is likely to affect operating leverage.

[361] NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd"(29 May 2018), Section 2.3; TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 18.

Capital expenditure to RAB as a proxy for operating leverage

A112 A large capital expenditure program compared to historical levels is likely to increase operating levering using this measure. However, it is remains unclear (as discussed above) how this directly affects operating leverage which is related to the proportion of fixed to variable costs.

A113 NERA point to this measure being used by Ofgem in their RIIO GD1 and T1 determinations. Ofgem considered the scale of investment impacts asset beta and justifies a higher return given increased 'cashflow risk'.[362] However, relevant context includes:

A113.1 All capital expenditure incurred by the Ofgem-regulated businesses is subject to an 'incentive rate' of approximately 50%.[363] This is much higher than an equivalent rate for Auckland Airport who can include all capital expenditure costs in the regulated asset base without reference to how efficiently or prudently they have been incurred.

A113.2 Ofgem's own advisors to the reset appeared sceptical of Ofgem's approach which linked cash flow risk to asset beta recommending "a more explicit rationale for the judgement in terms of risk asymmetry and systematic risk".[364]

A114 When reviewing Ofgem's approach in a paper for Heathrow Airport, PwC also noted that differences in cost of equity across different sectors are not driven only by scale of investment, but also due to expenditure variability and the level of the incentive rate applied to each company.[365]

A115 Overall, the evidence from Ofgem provides some indication that the cost of equity could be pushed upwards from capital expenditure investment but the reasoning does not appear to be conclusive. In particular, NERA's view that a 13 percentage point increase in the measure of capital expenditure/RAB results in a 0.09 increase in asset beta, appears to overstate the increased equity risk (for the reasons given above).[366]

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362 Ofgem "RIIO-T1: Final Proposals for National Grid Electricity Transmission and National Grid Gas" (17 December 2017), paragraph 3.15; Ofgem "RIIO-GD1: Final Proposals - Finance and uncertainty supporting document" (17 December 2017), paragraph 3.14.

363 Ie UK regulated gas and electricity networks are exposed to approximately 50% of the difference between forecast and actual capex costs. Ofgem "RIIO-T1: Final Proposals for National Grid Electricity Transmission and National Grid Gas" (17 December 2017), Table 3.2.

364 Imrecon "RIIO reviews: Financeability study" (November 2012) page 13.]

365 PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017). Further information on this paper is provided in paragraphs [x to x].

366 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 2.3; BARNZ "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision (TDB Advisory)" (26 June 2018), page 12.

Free Cash Flow (FCF) to Revenue as a proxy for operating leverage

A116 NERA also suggest a measure of FCF to revenue as a proxy for operating leverage. They note that a 'variant' of this measure was used by the Competition and Markets Authority (CMA), formerly the Competition Commission (CC) in decisions on Bristol Water. However, the original measure used by the CC in 2010 and subsequently by the CMA in 2015 was a forecast measure of operating cash flow as a proportion of total revenue. [367,368]

A117 The CC/CMA considered the larger a business's operating cash flow (and therefore the larger the proportion of revenue that covers investments (ie, return of/on capital)) the lower the operating leverage of the business.

A118 A significant capital expenditure program, like Auckland Airport's proposed investment, would increase operating cash flow, leaving a larger 'buffer' to pay for capital investments. Therefore, on the CC/CMA measure, increased capital expenditure would decrease operating leverage, ie, an opposite conclusion to that suggested by Auckland Airport and NERA.

A119 NERA suggested a variant of the CC/CMA measure is to include capital expenditure and fixed interest costs into the cash flow measure resulting in a very low cash flow value. This seems a different approach to the measure used by CC/CMA and therefore its relevance seems limited.

A120 Using NERA's measure, it appears that as the percentage of debt financing increases, it increases fixed interest payments and thus increases operating leverage. At a high level, this appears unconvincing given we do not consider an increase in debt should necessarily result in an increase in the cost of capital.

A121 The overall relationship between leverage and cost of capital is complicated and was covered in detail at the time of setting the initial IMs and the subsequent merits appeal.[369] However, we do not consider it appropriate for there to be an incentive to increase debt to obtain a higher cost of capital. We also question why Auckland Airport would look to mostly fund new investment with debt if it truly resulted in a higher overall cost of capital.

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367 Competition Commission "Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991" (4 August 2010) – Appendix N, paragraphs 127-131; Competition and Markets Authority "Bristol Water plc: A reference under section 12(3)(a) of the Water Industry Act 1991" (6 October 2015), paragraphs 10.143-10.165 and Appendix 10.1, paragraphs 107-136.

368 This measure applied by the CC/CMA is a variant of the measure of EBIT/revenue we considered above, but excludes depreciation.

369 Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), Section 6.6; *Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC* (11 December 2013), paragraphs 1570-1661.

A122 The CMA measure has also been subject to criticism, not least because of the implausibly high asset beta values that could have arisen if it had been applied to all companies in the UK water sector, rather than just to Bristol Water.[370]

A123 On the whole we consider both proxies provided by NERA are effectively 'measures of increasing capex' and although they illustrate measures of capital expenditure increases, they do not necessarily illustrate the degree to which operating leverage is increasing and why it impacts on asset beta.

Other measures and proxies for operating leverage

A124 First New Zealand Capital (FNZC) has also provided a forecast of the 'operating leverage ratio' in its report for Auckland Airport.[371] It has defined the operating leverage ratio as (Revenue – Variable Costs)/EBIT and noted that it shows an increase in operating leverage over the 5 year PSE3 period. FNZC's measure of operating leverage requires an estimate of variable costs.

A125 FNZC has not stated explicitly how it has determined the variable costs but it appears to assume 40% of operating expenditure is variable, and therefore 60% is fixed. There is no information on the reasons for this assumption but it is similar to our assumption in the draft report that 50% of operating expenditure could be fixed.

A126 However, as noted by FNZC the biggest impact on the operating leverage ratio is the high level of forecast capital expenditure that leads to a "significant increase in depreciation expense relative to the contribution margin".[372] This approach to considering operating leverage again results in a direct link between increasing capital expenditure and an increase in the measure of operating leverage. However, as noted above, we do not consider that increased capital expenditure necessarily results in increased operating leverage.

A127 Importantly, Auckland Airport's particular circumstance is also likely to significantly affect the measure for operating leverage used by FNZC. The measure provided by FNZC is often used as an estimate of operating leverage, but normally in the context of a workably competitive market in which revenue is correlated to variable costs and independent of fixed costs.[373]

A128 The assumption that revenue is independent of fixed costs appears to break down for Auckland Airport. FNZC's measure assumes that depreciation associated with historical capital expenditure, and 60% of total operating expenditure, are fixed

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370 PwC "Company specific adjustments to the WACC: A report prepared for Ofwat" (August 2014), Section 3; OFWAT "Delivering Water 2020: Our methodology for the 2019 price review – Appendix 12: Aligning risk and return" (13 December 2017), Section 7.3.1.

371 First New Zealand Capital "Auckland International Airport: WACC input methodology" (29 May 2018), Figure 4.

372 First New Zealand Capital "Auckland International Airport: WACC input methodology" (29 May 2018), Page 3.

373 TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), Figure 3.

costs. FNZC consider the high level of fixed costs directly impacts the degree of operating leverage.

A129 However, under the regulated building blocks approach, the magnitude of these fixed costs directly affects Auckland Airport's total revenue. This is different to the situation in a competitive market in which fixed costs are assumed to be largely independent of revenue. Consequently, the level of fixed costs for Auckland Airport is less likely to lead to volatility in EBIT (compared to the situation in a competitive market) and therefore the impact on operating leverage is unlikely to be as significant.

A130 The combination of the interaction between capital expenditure and revenue, and the difficulties of determining true fixed and variable costs, mean that we consider a more appropriate measure of operating leverage is to use the ratio of the change in revenue over the change in EBIT, as described in paragraphs A88 to A90.TDB Advisory (for BARNZ) suggested another proxy for operating leverage which is committed capital expenditure/market enterprise value.[374] It submitted that:

> First, capital expenditure is only an additional "fixed cost" for the period from commitment until it is spent. Until the money is committed the capital expenditure is a variable cost. Once it is spent it is a sunk cost. Apart from very large projects most capital expenditure occurs relatively quickly. Operating leverage reflects fixed operating costs or future commitments, it does not reflect capital intensity per se.

A131 In reference to the use of the market enterprise value TDB Advisory (TDB) explains that:

> We use the whole enterprise as this is what we have observable market information on. Also, the additional risk to the enterprise of capital expenditure must be seen in the context of the size of the whole company. Similarly, the comparable company data is based on the whole company, and the comparable companies, like AIAL, include non-aeronautical activities.

A132 We consider this metric may be a useful reference point, particularly given our asset beta estimation methodology first considers asset beta on a whole of airport basis (ie, including aeronautical and non-aeronautical returns) before making an adjustment to make it consistent with an aeronautical-only business.

A133 Committed capital expenditure may also be more relevant than total capital expenditure in determining fixed costs for the reasons described by TDB. This point was also raised by Dr John Small (for BARNZ), who had previously questioned whether Auckland Airport could defer capital expenditure projects, delaying the impact on operating leverage. Specifically, he stated that the NERA report:[375]

> Neglects the fact that 19 of the 35 capital projects scheduled for PSE3 have decision trigger points later than the first year and are therefore able to be deferred during PSE3.

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374 TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 12.

375 Dr John Small "Response to NERA on WACC for AIAL" (13 April 2017), paragraph 3(a) and 17.

> Even if this theory were correct (which is doubtful for the reasons discussed above), the NERA approach assumes that [Auckland Airport] will be irrevocably committed to the proposed investment programme at the outset of PSE3, which is not correct.

A134 Although we agree it is possible that some of the capital projects could be deferred, we accept the general point that Auckland Airport's operating leverage could increase in PSE3 due to its capital expenditure programme. However, based on the available evidence, we are not convinced that any increase in operating leverage will be significant enough to materially impact Auckland Airport's position relative to the comparator companies.

A135 On balance, we consider that the available evidence suggests the likely increase in Auckland Airport's operating leverage will be relatively immaterial in PSE3. We consider that limited weight can be put on the cash flow measures given that they depend on different assumptions as to which group of costs are considered 'fixed'. The main rationale continues to be an intuition or assumption that increasing capital expenditure is likely to increase fixed costs and therefore operating leverage, but with no evidence on how fixed costs would be expected to increase.

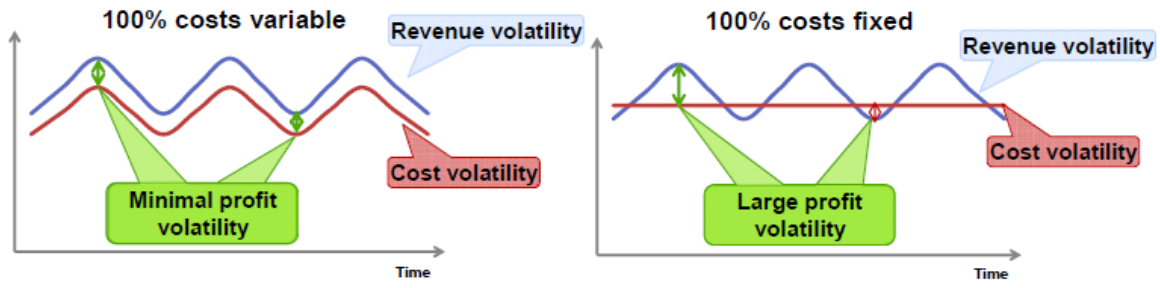
Is Auckland Airport's beta expected to increase due to operating leverage?

A136 Auckland Airport states that its exposure to systematic risk will increase due to the increase in operating leverage resulting from its capital expenditure programme.

A137 NERA explains the intuition behind the expected relationship between operating leverage and beta in its report for Auckland Airport. NERA notes that "companies with higher proportion of fixed costs cannot adjust their cost base in response to demand and revenue fluctuations. Consequently, their profits are more volatile, leading to greater risk for investors".[376]

A138 Figure A6 below, replicated from NERA's report, shows this graphically using the extreme examples of 100% variable costs and 100% fixed costs.[377]

Figure A6 Impact of cost structure (fixed vs variable) on companies' profit margins



[376] NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 5.

[377] NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), figure 2.2, page 5.

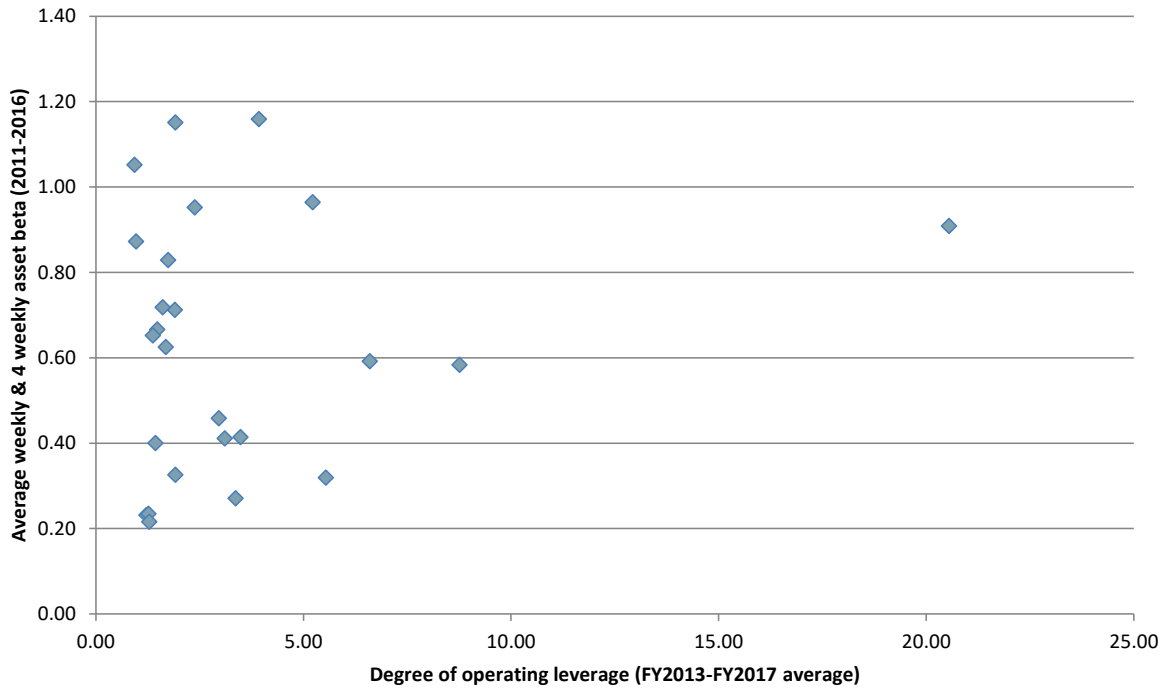
A139 The link between the degree of operating leverage and beta is relatively well established in academic literature. For example:

A139.1 Brealey, Myers and Allen note that "a production facility with high fixed costs, relative to variable costs, is said to have high operating leverage… Empirical tests confirm that companies with high operating leverage actually do have high betas".[378]

A139.2 Professor Damodaran states "a firm that has high operating leverage (ie, high fixed costs relative to total costs) will also have higher variability in operating income than would a firm producing a similar product with low operating leverage. This higher variance in operating income will lead to a higher beta for the firm with higher operating leverage".[379]

A140 However, the expected relationship between the degree of operating leverage and asset beta is not clearly observed for our asset beta comparator sample, indicating that the impact may be relatively small for airports. Figure A7 below plots the average weekly and 4-weekly asset beta for 2011-2016 against the average degree of operating leverage for FY2013-FY2017, for the airports in our comparator sample.[380]

Figure A7 Scatter plot of asset beta and degree of operating leverage for our comparator sample



378 Brealey, Myers and Allen "Principles of corporate finance" (11th ed).

379 Aswath Damodaran "Damodaran on Valuation: Security Analysis for Investment and Corporate Finance" (2nd ed, 2011).

380 The asset beta estimates are taken from our 2016 IM review decision, and the degree of operating leverage data is sourced from Bloomberg (as shown in Figure A3 above). The asset beta estimates are for the five year period ending 31 March 2016 and the degree of operating leverage estimates are averaged over the five year period ending FY2017.

A141 Dr John Small (for BARNZ) made a similar observation in his comments on NERA's report, although he used the measures of operating leverage reported by NERA (capital expenditure per passenger and capital expenditure per percentage of turnover).[381]

A142 In response, NERA stated that "Small does not sufficiently adjust for differences between comparator airports to support his assertion, including regulatory regime and passenger mix, and his claimed negative relation is statistically insignificant".[382] However, we note that the onus is on Auckland Airport (and NERA) to provide evidence to substantiate any significant relationship between operating leverage and asset beta, rather than simply rejecting Dr Small's observation.

A143 The TDB report also describes a methodology that assesses the impact potential changes in asset beta, dependent on different assumptions of fixed costs. Specifically it uses the operating leverage definition provided by Brealey, Myers and Allen[383] to provide a relationship between asset beta, a revenue beta, the present value of fixed costs, and the present value of all assets, as shown below.[384]

$$\beta_{Assets} = \beta_{Revenue}\left[1 + \frac{PV(fixed\ Costs)}{PV(asset)}\right]$$

A144 TDB use this equation to illustrate the impact on asset beta from varying the level of committed capital expenditure, given assumptions about the proportion of operating expenditure which is fixed (50%), the asset beta (0.60) and the present value of all assets ($10.5bn which is the enterprise value of all of Auckland Airport).

A145 Using these assumptions TDB suggest that increasing committed capital expenditure from $88m to $550m, consistent with Auckland Airport's proposed investment, would increase the asset beta by from 0.6 to 0.622.

A146 We note TDB uses the asset beta of 0.60 associated with regulated services in its calculations rather than the unadjusted asset beta 0.65. We consider the latter is more appropriate given the use Auckland Airport's total business to determine the present value of the asset. However, we have tested TDB's approach with an asset beta on 0.65 and found that it has a limited impact.[385]

A147 TDB make a number of assumptions to estimate the present value of fixed costs used in its calculations. Fixed costs are difficult to determine precisely but TDB's

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381 John Small "Response to NERA on WACC for AIAL" (13 April 2017), paragraphs 11-16.

382 NERA "Target Return and WACC for Auckland Airport – Response to John Small Paper: A Report for Auckland Airport" (23 May 2017), page i and 8-9.

383 Brealey, Myers and Allen "Principles of corporate finance" (11th ed), pages 227-228.

384 TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 11.

385 Using 0.65 rather than 0.6 increases the impact of committed capex on asset beta by a multiple of 1.0833 (ie, 0.65/0.6). For example, TDB originally estimated that the impact of $550m of committed capex could potentially increase asset beta by 0.022. Using an asset beta of 0.65 rather than 0.6 increases the potential impact to 0.024.

methodology does illustrate why a capital expenditure programme which increases fixed costs is likely to increase asset beta. However, it also illustrates why the magnitude of this increase may be limited, when it is considered in the context of the total value of the airport.

A148 We agree with TDB's view that its framework suggests the asset beta will be influenced by the cyclical nature of revenue from changes in demand much more than operating leverage given the high levels of revenues to expenses.[386]

A149 TDB also notes that even the relatively small impact on asset beta from an increase in fixed costs may be an overestimate because Auckland Airport is a monopoly subject to regulation. They note how Auckland Airport will have greater certainty of revenue when undertaking capital projects than a firm in a competitive market.[387] This is true even for projects subject to delays given they earn a compounded WACC return on work-in-progress when it enters the RAB upon commissioning.

A150 TDB's reasoning is similar to why we previously considered the metrics of operating leverage based on capital expenditure have limited value when considering operating leverage.[388]

A151 Dr Lally has also previously discussed the relationship between operating leverage and asset beta in the context of airports, highlighting the findings of several empirical studies. He concluded that "high operating leverage of airports should magnify their betas":[389]

> If firms have linear production functions and demand for their output is the only random variable, then firms with greater operating leverage (higher fixed to total operating costs) should have greater sensitivity to real GNP shocks because their cash flows will be more sensitive to own demand, and hence to real GNP shocks. A number of papers including Rubinstein (1973), Lev (1974) and Mandelker and Rhee (1986) have modeled this. However the assumptions noted above, which underlie this work, are very restrictive. Booth (1991), by contrast, examines a perfectly competitive firm facing price uncertainty, and reaches the opposite conclusion about the sign of the relationship between operating leverage and beta. In respect of empirical work, Lev (1974) shows that operating leverage is positively correlated with equity beta, for each of three industries. Mandelker and Rhee (1974) refine the procedure and reach the same conclusion in respect of a set of firms spanning numerous industries. However Lev's conclusions are specific to the three industries examined. Furthermore Mandelker and Rhee's conclusions are at best valid for the majority of firms included in the data set, i.e. some industries may exhibit the opposite pattern but are outweighed in the data set. These concerns about lack of generality of the results are prompted and supported by the theoretical literature just surveyed. Nevertheless, the situation facing airports would seem to correspond to that modeled by Rubinstein et. al., and this implies that the high operating leverage of airports should magnify their betas.

386 TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 11.

387 TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 11.

388 See paragraphs A112-A123.

389 Martin Lally "The cost of capital for the airfield activities of New Zealand's international airports" (June 2001), page 372.

A152 We agree with Dr Lally that there is likely to be a positive relationship between operating leverage and asset beta for airports, despite our comparator sample not clearly demonstrating this link. Figure A7 may suggest that the impact of higher operating leverage on beta is not strong for airports, possibly because airports generally already experience relatively high operating leverage, and so this is reflected in the betas observed for these companies.

A153 The key question is whether any expected increase in Auckland Airport's operating leverage is large enough to justify departing from our comparator estimate of 0.60, and if so by how much.

A154 Empirical studies can be used to estimate the expected impact of differences in the degree of operating leverage on beta. For example, Mandelker and Rhee (1984) and Chung (1989) estimate the relationship between degree of operating leverage and beta using regression analysis.[390]

A155 However, as noted by Dr Lally, care needs to be taken when considering the results of empirical studies, particularly given some of the restrictive modelling assumptions.

A156 In addition, the approach to setting prices could potentially dampen the effect of operating leverage on asset beta. NERA previously advised that the impact of operating leverage depends on the regulatory framework, noting that operating leverage is of limited relevance for companies subject to a revenue cap because they are protected from revenue fluctuations.[391] Although Auckland Airport's approach to setting prices is more akin to a price cap than a revenue cap, we note that it likely has more flexibility to reset prices than a business subject to price cap regulation.

A157 For the reasons given above, we are not convinced that Auckland Airport's forecast operating leverage for PSE3 will be materially different from the historical average of our comparator sample over the period we estimated the asset beta.

A158 While Auckland Airport's operating leverage may increase, it is not clear to us that this will be sufficient to justify an asset beta that is higher than our (comparator sample-based) estimate. We have not been persuaded that Auckland Airport's expected degree of operating leverage over PSE3 will be so significantly different to the average of the comparator sample, that an increase in asset beta of 0.08 is justified.

A159 We consider a significant portion of systematic risk faced by Auckland Airport is likely to be within period demand risk affecting revenue recovery, but this should be broadly independent of risks associated with the capital expenditure programme.

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390 Mandelker and Rhee "The Impact of the Degrees of Operating and Financial Leverage on Systematic Risk of Common Stock", Journal for financial and quantitative analysis, vol 19, no 1, March 1984; and, Chung, K. H. "The impact of the demand volatility and leverages of the systematic risk of common stocks", Journal of Business Finance & Accounting, 16(3), summer 1989.

391 NERA "Relative Risk of London Heathrow – A Report for London Heathrow" (31 January 2013), page 41.

Capital expenditure investment impact on non-systematic risks

A160 Our view is that there appears to be limited impact from the large investment program on operating leverage and thus the systematic risk that is compensated through asset beta. However, we are not suggesting that a large capital expenditure programme is not without firm-specific risks to Auckland airport. For example, there could be:

A160.1 construction risks (including cost and timing factors); and

A160.2 increased financial risks associated with increasing leverage.

A161 However, we do not consider compensation for these firm-specific risks should be paid for by consumers through the WACC element of airport pricing, especially when firms are able to manage and mitigate those risks though their own choices and via the regulatory framework. For example:

A161.1 Auckland Airport is able to recover forward-looking costs of all capital expenditure whenever it re-prices its regulated service, and as noted by BARNZ it has the ability to do this at any time.[392] This results in a significantly lower risk from capital expenditure projects for Auckland Airport than some of the regulated businesses it compares itself to above (eg, UK energy businesses have incentive rates of ~50%)

A161.2 It is able to develop risk sharing mechanisms with its customers to mitigate the risks associated with its capital expenditure programme. BARNZ and Air NZ note that it has turned down such approaches.[393]

A161.3 As noted by TDB, Auckland Airport also has significant choices about how it funds any capital expenditure programmes.[394] This could be through issuing new debt or equity or through selling assets. These choices also enable it to manage the non-systematic risk associated with capital expenditure investment without requiring increased returns from higher prices to consumers.

A162 Given the options available to Auckland Airport and the level of firm-specific risk, on balance we do not think an additional return for firm-specific risk is warranted for PSE3.

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392 BARNZ submit that the costs of re-pricing aren't likely to be a significant barrier in a scenario where it could potentially lose a significant amount of money. BARNZ "Cross-submission on Draft Report on AIAL's PSE3 pricing decision" (26 June 2018), paragraph 16.

393 BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 12; Air New Zealand "Response to the Process and Issues Paper: Auckland and Christchurch Airports' third price setting events (July 2017-June 2022)" (28 November 2017), paragraphs 25-28.

394 TDB Advisory, "Review of Aspects of AIAL's Beta for the PSE3 Pricing Decision: A report prepared for BARNZ" (26 June 2018), page 18.

How have other regulators addressed differences in operating leverage when considering asset beta for airports?

A163 Auckland Airport and NERA identified examples where other regulators have made asset beta adjustments due to operating leverage. In particular, Auckland Airport and NERA referred to a 2007 decision from the UK Competition Commission regarding differences in the relative asset betas of Heathrow and Gatwick Airports;[395]

A164 In addition, Heathrow Airport was previously allowed an uplift to its cost of capital in the context of construction of Terminal 5. The UK Civil Aviation Authority (CAA) is also currently considering its approach to Heathrow Airport's planned third runway.

A165 These examples are discussed in more detail below. We note that these examples generally resulted in smaller uplifts to the asset beta, and the cost of capital, than Auckland Airport's implicit asset beta adjustment of 0.08, increasing its cost of capital by 56 basis points.

A166 Operating leverage was one of three factors the UK Competition Commission considered when determining the relative asset betas for Heathrow and Gatwick Airports. The others were demand risk and the riskiness of client airlines. The UK Competition Commission stated:[396]

> In assessing the relative riskiness we considered demand risk, riskiness of the client airlines and operational leverage.
>
> We perceived Heathrow as the lowest risk [British Airports Authority] airport. Its passenger numbers were less affected by the 11 September 2001 terrorist attacks (September 11), it is considered to have excess demand and its client airlines are relatively low risk. After Heathrow, Gatwick is likely to be perceived as less risky than the remainder of the BAA group. It is a regulated business, subject to five-yearly resets of price caps, and has been shown to face less demand risk than BAA's third major airport, Stansted.
>
> We would expect the systematic risk of Gatwick to be higher but not substantially higher than Heathrow. We therefore used an asset beta for Gatwick which is 0.05 higher than for Heathrow.

A167 The UK Competition Commission also noted that Heathrow Airport has lower operating leverage than both Stansted and Gatwick Airports, but did not explicitly mention this factor when reaching its conclusion in the quote above.[397]

A168 Therefore, Heathrow Airport was considered to be the lowest risk airport on all three measures. Despite this, the UK Competition Commission determined an asset beta

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395 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 27.

396 Competition Commission "BAA Ltd: A report on the economic regulation of the London airports companies (Heathrow Airport Ltd and Gatwick Airport Ltd)" (28 September 2007), paragraphs 4.83-4.84.

397 Competition Commission "BAA Ltd: A report on the economic regulation of the London airports companies (Heathrow Airport Ltd and Gatwick Airport Ltd)" (28 September 2007), Appendix F, paragraph 114(c).

for Heathrow Airport that was only 0.05 lower than for Gatwick Airport. This suggests that any adjustment associated with operational leverage alone was small.[398]

A169 NERA also noted that, in a 2015 price determination for Bristol Water, the UK CMA applied an uplift to the asset beta due to operating leverage. This increased the mid-point of its range from 0.28 to 0.32.[399]

A170 Although not directly related to operating leverage, the UK Competition Commission previously allowed an uplift to the WACC for BAA of 0.25 percentage points, reflecting the "exceptional circumstances" represented by the construction of Terminal 5 (T5) at Heathrow Airport.[400] We note that the uplift of 0.25 percentage points is significantly lower than the impact of the implicit adjustment Auckland Airport has made to our asset beta for PSE3, which increases its post-tax WACC by 0.56 percentage points.[401]

A171 Heathrow Airport currently has another large capital expenditure programme planned, the development of a third runway.

A172 The CAA is in the early stages of considering its approach to Heathrow Airport's next price control period (H7). It commissioned PwC to provide an "early and preliminary" range for Heathrow Airport's cost of capital, noting that "the early analysis produced by PwC is one input into our wider decision making process, and our final range and final determination of the WACC could be different from PwC's early and preliminary range".[402]

A173 PwC's report for the CAA notes that the directional impact of large capital programmes on systematic risk during the programme itself is conceptually unclear, and will depend on the nature and mix of the costs involved.[403] For example, cost risks can often have a negative correlation with the broader economic environment (ie, a strong economic environment can drive-up costs).

A174 Given the ambiguous impact from a conceptual perspective, PwC reviewed six case studies of other WACC adjustments intended to capture the additional risks during

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398 Competition Commission "BAA Ltd: A report on the economic regulation of the London airports companies (Heathrow Airport Ltd and Gatwick Airport Ltd)" (28 September 2007), paragraph 4.85.1. We also note that the asset betas for Heathrow and Gatwick, of 0.47 and 0.52 respectively, are significantly lower than the asset beta 0.68 that is implicit in Auckland Airport's target return of 6.99%.

399 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 15.

400 Competition Commission "BAA plc: A report on the economic regulation of the London airports companies (Heathrow Airport Ltd, Gatwick Airport Ltd and Stansted Airport Ltd)" (2002), page 179.

401 See Figure A1 above.

402 CAA "Economic regulation of capacity expansion at Heathrow: policy update and consultation – CAP 1610" (December 2017), paragraph 2.14.

403 PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017), paragraph 6.18.

the construction phase of a project (including Heathrow Terminal 5).This resulted in an indicative "plausible range for this uplift" of 0.25% to 1.0%.[404]

A175 However, PwC stated that "a WACC uplift associated with the third runway is more likely to be towards the bottom of the range". It gave the following main reasons for this conclusion.[405]

A175.1 Cost overruns, where incurred efficiently, through factors outside of management control, are likely to be recoverable under the current capital expenditure incentive mechanisms in place. This protects Heathrow Airport from some of the large down-side risks that are built into the top-end of the range.

A175.2 The benchmarks which are most comparable to Heathrow Airport's third runway are at the low end of the range.

A176 We consider that differences between the UK and New Zealand regulatory regimes further limit the relevance here for an uplift based on PwC's findings. In particular, Auckland Airport is subject to information disclosure, but Heathrow Airport is subject to price control regulation.

A177 Significantly, Auckland Airport is able to include all its capital expenditure in the RAB (without being subject to binding reviews of efficiency or prudency of the spending), and flow this through to its prices.[406] We consider that this significantly reduces Auckland Airport's exposure to risks of large capital expenditure projects.

BARNZ's concerns regarding the implications of Auckland Airport's operating leverage rationale

A178 BARNZ submitted to *the Process and Issues paper that* airlines are very concerned about the implications of Auckland Airport's operating leverage analysis. It stated that:

A178.1 The NERA analysis is a very troubling precedent to set in the New Zealand regulatory context, and if it were accepted, then all a regulated supplier would have to do to justify a higher beta, and therefore WACC, is substantially increase its capital expenditure forecast.

A178.2 Orion, Transpower, and Powerco have, or are about to, undertake investment step changes. These businesses did not require a higher WACC as part of those step changes.

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404 PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017), page 9.

405 PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017), paragraph 6.83.

406 However, any capex overspend would only affect prices from the next PSE. Auckland Airport would not receive a return on and of capital for any capex overspend within the current pricing period.

A178.3 Auckland Airport has not committed to setting a lower WACC in future when its operational leverage reduces. In PSE2 the airport had a 75th percentile WACC despite much lower operational leverage.

A178.4 The regulatory framework may be producing a situation where each airport finds their own reason to justify an uplift, but those reasons are not consistent over time or with each other.[407]

A179 In the context of the current review, we consider that if the capital expenditure forecast is credible, the investment is in the long-term benefit of consumers, and is material enough to significantly impact operating leverage, then an asset beta adjustment could be considered. We also note that:

A179.1 Orion and Powerco required a customised price-quality path (CPP) to allow for significant new investment that would not have been covered by the default price-quality path (DPP).[408] However, in the current context, we are assessing airports target returns for the purpose of summary and analysis of information disclosure. Airports are able to determine their investment plans in consultation with airlines.

A179.2 We will consider Auckland Airport's WACC estimates for future price setting events on their merits, including the expected impact of operating leverage at that time. We have also considered the consistency between Auckland and Christchurch Airports' approaches when forming our view on whether each airport's target return is justified, consistent with our framework for assessing target returns.

A180 In terms of consistency with past price setting events, we note that operating leverage was not mentioned previously by Auckland Airport when setting its target return.

A180.1 Auckland Airport used an asset beta of 0.65 in PSE2, noting that it placed greater emphasis on data specific to Auckland Airport, and that its new pricing structure exposed it to higher risk.[409]

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407 BARNZ stated that: "Christchurch Airport, which is not facing a capex step change in PSE3, has not considered operational leverage as a factor in setting its target WACC and has used a different rationale (the, in their view, greater risk of operating an airport with a higher proportion of leisure travel) to justify its own WACC uplift. Auckland Airport's status as an airport with a lower proportion of leisure travel has not been used by Auckland Airport as a reason to set a lower WACC for them. Nor has Christchurch Airport's position as an airport with lower operational leverage encouraged them to target a lower WACC." BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), pages 10-11.

408 In addition, we use 67th percentile WACC estimates for price-quality path regulation of electricity distribution businesses and Transpower. This is to mitigate against the risk of "under-investment relating to service quality generally, and contributing to major supply outages in particular". Commerce Commission "Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services: Reasons paper" (30 October 2014), paragraph X18.

409 Auckland Airport "Price setting disclosure in accordance with clause 2.5 of the Commerce Act (Specified Airport Services Information Disclosure) Determination 2010" (2 August 2012), page 24.

A180.2 If Auckland Airport had lower operating leverage at that time, this was not mentioned as an off-setting factor which would be expected to have a downwards effect on the asset beta.[410]

Is focussing on Auckland Airport's observed asset beta appropriate?

A181 Based on advice from NERA, Auckland Airport stated in its pricing disclosure that using the most recent estimates of Auckland Airport's observed asset beta is the best way to reflect the impact of Auckland Airport's forecast capital expenditure plan, and the increase in operating leverage that this will introduce over PSE3.[411] NERA considered Auckland Airport's asset beta over a range of estimation windows (including 5 years and 20 years), and concluded that a range of 0.73-0.81 is appropriate.

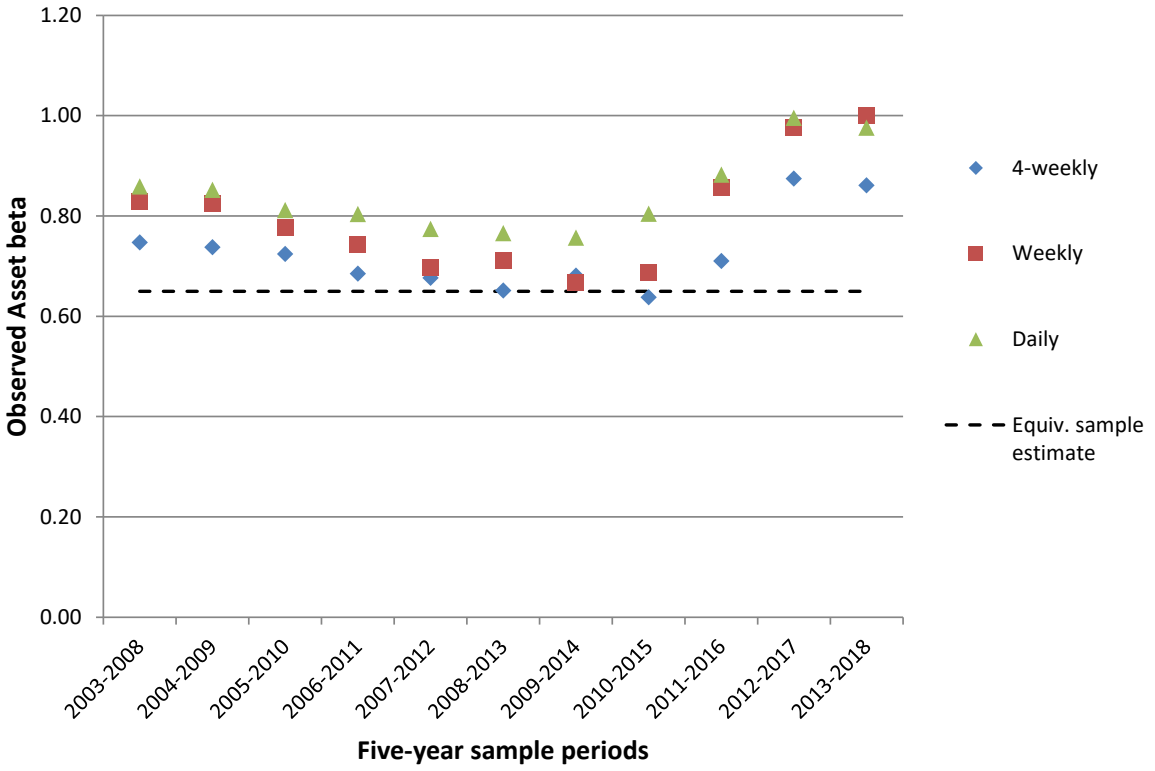
A182 We have plotted Auckland Airport's asset beta over recent 5 year periods with weekly and 4-weekly frequencies.[412]

[410] We consider that Auckland Airport's proposal to increase beta to reflect higher operating leverage would be more compelling if the company had adopted, or will adopt, similar logic in other periods where operating leverage is below average. For example, in the period 2012-2016 when operating leverage was relatively low, Auckland Airport did not propose a corresponding adjustment to beta.

[411] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 27.

[412] This is the same approach applied in the IM review. We prefer to focus on weekly and 4-weekly betas rather than daily betas because it reduces concerns about a lack of observations and there has is some academic evidence that longer frequency betas have superior characteristics for regulatory purposes. Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraphs 307.

Figure A8 Auckland Airport's observed asset beta estimate



A183 Our analysis shows that there has been an observed increase in asset beta for Auckland Airport over recent years. This is consistent with NERA's submission, on behalf of Auckland Airport.[413] We also note that Auckland Airport's asset beta has been consistently above our equivalent comparator sample estimate for a significant portion of the 15 year period covered by Figure A8.

A184 Auckland Airport claims this evidence shows the impact of increased operating leverage. However, we do not consider the conceptual reasoning persuasive, the observed increase in beta could arise from factors other than changes in operating leverage.

A185 Although Auckland Airport's observed asset beta is a useful reference point, we consider that asset beta estimates for a single company and over shorter reference periods are unreliable. Asset betas are 'noisy', and there is a significant risk of estimation error when focussing on the observed beta for an individual company. For this reason, we have used a comparator sample approach when determining asset beta estimates in the IMs.

A186 To further illustrate the unreliability of focussing on single shorter data periods we note that the observed daily asset beta for Auckland Airport has dropped almost 30%

413 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.2.1 and Appendix B.

in the most recent 12 month period (October 2017 to September 2018) compared to a year earlier.[414]

A187 This is consistent with our approach when determining WACC for Chorus' unbundled copper local loop and unbundled bitstream access services, where we decided to use a comparator sample instead of focussing on Chorus' actual asset beta.[415] Submissions during that process emphasised the importance of using a comparator sample when considering asset beta, rather than focussing on a single company. For example:

A187.1 CEG submitted that "beta is subject to very significant measurement error and can change materially over time. This makes it preferable to have regard to asset beta estimates from a large sample of companies".[416]

A187.2 PwC submitted that "due to the high level of estimation error around a single company's beta, the beta analysis should always be based on a group of comparable firms, rather than relying on direct observations of the regulated firm's own beta".[417]

A187.3 Frontier Economics submitted that "regulators rarely rely on a single firm to estimate beta; rather, regulators prefer to rely on a sample of firms to minimise the effect of estimation error from any single comparator influencing the overall beta".[418]

A188 Another key consideration when analysing Auckland Airport's observed asset beta is that the beta for Auckland Airport reflects the entire business, not just the regulated aeronautical activities. The MEUG submitted that "[g]reat care is needed if the Commission decides to apply an AIAL specific asset beta analysis given the RAB weighting is a small fraction of the market enterprise value of AIAL".[419]

A189 This seems particularly relevant given the value of the unregulated portion of Auckland Airport has been growing significantly faster than the regulated portion and is now approximately 85% of the total value of the business.[420] We would expect this to significantly affect the observed level of its asset beta.

A190 For example, growth in the value of the unregulated element of the business would be expected to result in an increase in the asset beta of the whole business without

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414 The observed daily asset beta for Auckland Airport was 0.84 in the period Oct 2017–Sep 2018 and 1.17 in the period Oct 2016–Sep 2017.

415 Commerce Commission "Cost of capital for the UCLL and UBA pricing reviews: Final decision" (15 December 2015), paragraphs 141-144.

416 CEG "Review of Lally and Oxera reports on the cost of capital" (July 2014), paragraph 10.

417 PwC "Submission on Commerce Commission's technical consultation paper: Determining the cost of capital for the UCLL and UBA price reviews" (28 March 2014), paragraph 25.

418 Frontier Economics "Determining a TSLRIC price for Chorus' UCLL service – A report prepared for Vodafone New Zealand, Telecom New Zealand and CallPlus (February 2014), page 31.

419 MEUG "Cross-submission on airport price setting event PSE3" (26 January 2018), paragraph 7.

420 Assuming the unregulated portion of Auckland Airport's business is equivalent to the Enterprise Value minus the RAB.

necessarily affecting the asset beta of the regulated part of Auckland Airport. No evidence has been provided on this. Therefore, we consider it is appropriate to focus on evidence regarding an adjustment from our comparator sample-based asset beta estimate of 0.60, instead of estimates of Auckland Airport's own asset beta.[421]

A191 There may also be other unknown factors that have affected the systematic risk of the *unregulated* business and which have shown up in observations of Auckland Airport asset beta, but which do not affect the asset beta of the *regulated* businesses.

A192 A submission from First Economics notes that UK practice has been to focus on individual asset beta estimates.[422] This approach may be appropriate in certain circumstances but it appears more suitable when using data from UK airports, which have a single till, without the potential for a separate unregulated element of the business to have a significant effect on returns.

A193 However, despite all of the described difficulties of assessing the implications of the observed asset beta estimates, we consider Auckland Airport's observed asset beta does have some relevance as a reference point. We consider the observed asset beta, as shown in Figure A8, gives some weight to Auckland's view that an appropriate asset beta could potentially be higher than our mid-point estimate.

A194 After assessing the evidence, and in particular the strong effect of expected unregulated revenues on the observed asset beta, on balance, we do not consider the observed asset beta can be used to explain a 0.08 asset beta adjustment to the regulated business.

Other reasons for a higher asset beta

A195 Auckland's main rationale in its pricing disclosure for departing from our mid-point estimate was due to an increase in operating leverage. However, Auckland Airport (supported by NERA) have submitted some further reasons why a higher asset beta should be applied:

A195.1 Our comparator sample includes airports subject to a different regulatory regime to Auckland Airport. In particular they consider a number of airports in the comparator sample have the ability to reset prices more frequently than Auckland Airport and therefore should be excluded from the sample.[423]

[421] We also note that Auckland Airport's approach of focussing on estimates of its own asset beta would not be possible for the other regulated airports in New Zealand. Given that Christchurch and Wellington airports are not publicly listed, a sset beta estimates are not available.

[422] First Economics "Auckland Airport's estimate of beta: Prepared for Auckland Airport by John Earwaker and Dr Harry Bush" (May 2018), pages 13-14.

[423] NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.1.

A195.2 Our comparator sample has some unreliable data due to the low liquidity of the shares of some businesses.[424]

A195.3 Auckland Airport has a higher proportion of long-haul passengers than other airports and which are more sensitive to oil price movements. As a result the systematic risk associated with these passengers is higher.[425]

Our assessment of Auckland Airport's views on the asset beta comparator sample

A196 NERA states our comparator sample used to estimate asset beta includes airports subject to a different regulatory regime to Auckland Airport. In particular, they consider a number of airports in the comparator sample have the ability to reset prices more frequently than Auckland Airport and therefore should be excluded from the sample.[426] NERA also suggest that we should remove companies from the comparator sample whose shares fall below a certain liquidity threshold.[427]

A197 We do not consider changes to the comparator sample are justified given:

A197.1 NERA focussed on one aspect of the regulatory regime (ie, ability to reset prices) in removing comparators, without considering other aspects of the regulatory environment in which the comparators operate. Other aspects of the regulatory environment may also be different to Auckland Airport.

A197.2 We have already used a liquidity filter to remove comparators with low liquidity and NERA have not provided reasons why they consider an alternative would result in improvements to the asset beta estimates.

A197.3 There were significant amounts of analysis and consultation that preceded the setting of our mid-point WACC estimate, including the make-up of the comparator sample. We therefore consider significant weight should be put on this estimate as a starting point for assessing airport returns and any explanation for a higher return should be with reference to this starting point.

Our assessment of Auckland Airport's views on other issues affecting its target return

A198 Auckland Airport suggests that it has a higher proportion of long-haul passengers than other airports, and that long-haul travel is more sensitive than short-haul travel to oil price movements. As a result, Auckland Airport suggests that the systematic

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424 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.2.

425 Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 120.

426 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.1

427 NERA "Response to the NZCC's View on Auckland Airport's Asset Beta: A Report for Auckland International Airport Ltd" (29 May 2018), Section 3.1.2.

risk associated with these passengers is higher because a higher jet fuel price also negatively impacts general economic performance.[428]

A199 This may have some effect on asset beta, but we consider more information would be required before we could judge the significance of any impact on asset beta. For example, useful information would be:

A199.1 How the proportion of long-haul passengers at Auckland Airport compares to other airports.

A199.2 How the proportion of long-haul passengers impact overall demand and thus systematic risk. For example, other airports may have a higher proportion of short-haul passengers, but potentially greater competition from other travel options (eg, express trains) which may become more viable options as jet fuel prices increase.

A199.3 How long-haul and short-haul passengers are split between foreign and domestic consumers. A higher proportion of long-haul passengers may also indicate a higher proportion of foreign consumers whose demand is less aligned with New Zealand market conditions. This could potentially reduce systematic risk.

A200 Overall, there may be many different factors that affect systematic risk to varying degrees. This means that we are relatively cautious in considering departures from the asset beta used in our mid-point WACC estimate. It is also why we are keen to emphasise the need for airports to provide clear evidence including the consideration of any countervailing effects in justifying a change to asset beta.

Conclusion regarding Auckland Airport's asset beta

A201 An adjustment to our asset beta estimate may, in principle, be justified if Auckland Airport can demonstrate that:

A201.1 its operating leverage is (or is expected to be) significantly higher than the companies in our comparator sample; and

A201.2 any difference is of a magnitude that can reasonably be expected to meaningfully impact the asset beta.

A202 However, based on the evidence before us, we are not convinced that:

A202.1 Auckland Airport's expected operating leverage over PSE3 will be materially above the average operating leverage for the companies on our comparator sample; and

A202.2 even if it was, there is little evidence to support the magnitude of its implicit 0.08 adjustment to asset beta.

[428] Auckland Airport "Section 53B review of Auckland Airport's pricing decision and expected performance for PSE3: submission on the draft report" (29 May 2018), paragraph 120.

A203 Therefore, we consider that Auckland Airport's implicit adjustment to asset beta has not been sufficiently justified.

We disagree with Auckland Airport's view that a TAMRP of 7.25% is appropriate

A204 Auckland Airport also stated that it considers a higher market risk premium of 7.25% (rather than our estimate of 7%) is appropriate to use when developing its best estimate of its Auckland Airport-specific WACC. This was based on advice from NERA, reflecting a report from UniServices during the 2016 IM Review.

A205 However, Auckland Airport subsequently noted that it used our TAMRP of 7% when undertaking its cross-checks using our WACC methodology.[429] As noted above, it only adjusted the asset beta and cost of debt when undertaking these cross-checks.

A206 We continue to consider that a TAMRP of 7% is appropriate. The TAMRP is a market-wide parameter, so we apply a TAMRP of 7% for all sectors and firms regulated under Part 4 of the Commerce Act. We considered the UniServices report in the IM Review, and no new arguments for a higher TAMRP have been presented by Auckland Airport.[430]

Our assessment of Auckland Airport's approach to the cost of debt

A207 This section discusses Auckland Airport's decision to use its cost of debt of 4.52%, rather than our estimate of 4.41% (as at 1 April 2017).

Auckland airport has used its own forecast cost of debt, rather than our benchmark value

A208 Auckland Airport used its forecast cost of debt for PSE3 of 4.52% when developing its firm-specific WACC estimate. Auckland Airport noted that its existing debt in place today must be serviced, and it considers its forecast cost of debt funding provides a better reflection of the true cost to its business of current and future debt.[431]

A209 Auckland Airport noted that:

A209.1 it has reflected the historical and projected debt financing costs for Auckland Airport, rather than the notional efficient entity embedded in the Commission's industry estimate of 4.41% (as at 1 April 2017);

A209.2 as at 30 June 2016, it had circa $1.9 billion of debt comprised of a mix of bank debt, commercial paper, fixed and floating rate bonds and US private placement bonds across various tenors, with an average cost of funding of 5.09%;

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429 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: Cross submission on process and issues paper" (19 December 2017), page 8.

430 Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraphs 490-533.

431 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

A209.3 as it continues to raise further debt to partially fund its forecast capital programme, it anticipates that its average cost of funding will reduce as expensive debt is refinanced at lower rates prevailing at the time of issue, albeit with some widening of the borrowing margin; and

A209.4 after considering advice from NERA about its forecast cost of debt, it considers that this reduction in financing costs combined with the ongoing diversification of its mix of debt will result in a forecast cost of debt of 4.52% for PSE3. It considers this to be a "highly efficient funding rate for a business of our size, complexity and capital structure".

Our cost of debt estimate is appropriate for assessing Auckland Airport's profitability

A210 For the reasons set out below, we have used our cost of debt estimate of 4.41% (as at 1 April 2017) as an input to our mid-point WACC estimate for assessing Auckland Airport's profitability.

A211 Our methodology for estimating the cost of debt, as specified in the IMs, differs significantly from Auckland Airport's approach. In particular:

A211.1 our estimate of the cost of debt for airports is based on publicly traded New Zealand corporate bonds, with an A- long-term credit rating, and a five-year term to maturity; and

A211.2 Auckland Airport's forecast cost of debt reflects its actual debt portfolio (which includes a mix of bank debt, commercial paper, fixed and floating rate bonds and US private placement bonds across various tenors).

A212 We have not reviewed Auckland Airport's estimate of the cost of debt in detail.[432] However, we consider Auckland Airport's high-level approach to estimating its cost of debt (reflecting its actual debt portfolio) is reasonable, and note it leads to a similar cost of debt estimate to our benchmark. Auckland Airport stated that its estimate of 4.52% "is only marginally higher" than our sector-wide estimate of 4.41%.[433] This difference in cost of debt estimates affects the overall WACC by just two basis points.

A213 We note that Auckland Airport increased its cost of debt estimate between its draft and final pricing decisions, based on advice from NERA.[434] The cost of debt estimates used by Auckland Airport in its draft (4.32%) and final (4.52%) pricing decisions straddle our IM-based estimate of 4.41%.

A214 NERA advised that Auckland Airport had underestimated the base rate for bond refinancing by around 20 basis points, noting that NZ 10-year government bond yields are forecast to increase to around 4.2% by the end of the pricing period (June

[432] Auckland Airport's pricing disclosure contains limited details regarding the specific inputs to its forecast cost of debt.

[433] Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

[434] NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 17-23.

2022). This is compared to Auckland Airport's forecast of 3.99% in the last round of its bond refinancing in 2021.[435]

A215 However, we consider that the 20 basis point increase recommended by NERA has not been fully justified for the following reasons.

A215.1 The 20 basis point increase appears to have been applied to Auckland Airport's overall cost of debt, not just the new debt to which the forecast increase in base rate would apply. This is despite Auckland Airport adopting a weighted average approach, reflecting its historical and projected debt financing costs.[436]

A215.2 Auckland Airport is able to use interest rate swaps to broadly match the risk-free rate for the five-year pricing period.[437]

A215.3 NERA has used the 10 year sovereign forward curve when estimating the base rate, but Auckland Airport is expected to issue new bonds with seven year term to maturity.[438] This is likely to result in an overestimate of the base rate for seven year bonds. NERA does not explain why it considers the 10 year sovereign is the appropriate tenor to use when estimating the forward base rate.

A216 Overall, we consider the available evidence suggests our estimate of the cost of debt is reasonable. We have used our cost of debt estimate of 4.41% when assessing Auckland Airport's profitability given:

A216.1 our concern that the 20 basis point increase between Auckland Airport's draft and final pricing decisions has not been fully justified;

A216.2 the small difference between our estimate and Auckland Airport's forecast cost of debt suggests our benchmark is reasonable for an A- rated airport; and

A216.3 in any event, the impact of the difference between our estimate and Auckland Airport's forecast on the overall WACC is relatively immaterial (2 basis points).

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435 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), p iv.

436 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 29.

437 Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraphs 87-88.

438 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), Table 3.2, page 19.

Our assessment of Auckland Airport's target return on priced services

A217 This section discusses:

A217.1 whether Auckland Airport's target return on priced services is in the long-term benefit of consumers;

A217.2 whether there are any additional factors relevant to the Auckland Airport's target return; and

A217.3 our overall view regarding Auckland Airport's target return.

Is Auckland Airport's target return in the long-term benefit of consumers?

A218 In its pricing disclosure, Auckland Airport stated that:[439]

A218.1 the use of Auckland Airport-specific parameters to inform its choice of target return is a fair and reasonable response to the unprecedented circumstances it faces over at this point in its investment cycle, and to ensure that it determines a target return for PSE3 that helps to support the investment pathway and deliver long-term benefits for consumers;

A218.2 it does not consider it is appropriate to constrain efficient investment that its customers value and which is in the long-term interest of consumers in order to back-solve to a target return that is equivalent to our mid-point sector-wide WACC estimate;

A218.3 the most appropriate way to deliver long-term benefits to consumers is to focus on developing a capital expenditure plan that meets the needs of existing users and addresses the capacity required to provide for forecast growth, and then to set an appropriate target return that helps to support that plan. It considers that a target return of 6.99% helps achieve this objective while representing a balanced approach that seeks to mitigate the price impact on airlines and passengers and which acknowledges that Auckland Airport will also carry material risk in PSE3; and

A218.4 on average over the next five years, it is forecasting to spend the equivalent of $15 per passenger per year on common-use infrastructure to deliver long-term value for passengers and airlines. It considers the forecast investment plan provides substantial long-term benefits for consumers, and that its target return is appropriate in this context.

A219 BARNZ, on the other hand, submitted that it does not accept that the higher WACC will be in the long-term interest of consumers, as consumers will pay higher prices but will not receive any commensurate benefit. BARNZ stated that Auckland Airport

[439] Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 35-36.

is "pushing the boundaries" of what is acceptable in terms of target return.[440] It suggests that:

A219.1 Forsyth Barr calculates that Auckland Airport's true WACC is between 5%-6% (and this will apply to the listed Group, including higher risk unregulated activities), so 6.41% should be more than adequate to incentivise investment.

A219.2 It believes that all, or at least the vast majority, of the investment would go ahead if a 6.41% WACC was applied. The airport's commercial till will benefit from the growth that expanded terminal and airfield capacity will provide. Very few of Auckland Airport's capital expenditure programmes would not improve commercial till revenues. The airport's recent profit announcements for the FY2017 year demonstrate just how much value increased growth delivers for the airport.

A219.3 Auckland Airport's target WACC percentile (65th for priced services only, 67th when including other regulated services) is very similar to the pricing WACC percentile (67th) for energy companies, which have no dual till.

A220 We acknowledge the large capital investment programme that Auckland Airport is undertaking, and the potential negative cash flows this will bring, but this does not persuade us that our asset beta estimate (or overall WACC estimate) is inappropriate. As noted above, we consider that the dual till nature of airports weakens the case for an uplift to our mid-point WACC estimate (relative to energy businesses regulated under Part 4 of the Commerce Act).

A221 Further, we considered the reasonableness of our IM-based WACC estimates for airports in the 2016 IM Review. In particular, we noted that our mid-point post-tax WACC estimate for airports of 6.29% as at 1 April 2016 was reasonable, given it was:[441]

A221.1 similar to alternative New Zealand sourced post-tax WACC estimates for airports, after normalising for differences in risk-free rates. For example, our estimate was:

A221.1.1 above Deutsche Bank's estimate for the regulated segment of Auckland Airport's business (6.17%);

A221.1.2 above the post-tax WACC of 6.28% that Dunedin International Airport used for its 2014 disclosure year;

[440] BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 11.

[441] Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraph 708.

A221.1.3 within the range of broker estimates for Auckland Airport's entire business (ranging from 5.71% to 6.67%, with an average of 6.33%);

A221.1.4 below PwC's estimate for Queenstown Airport's aeronautical business of 6.86%; and

A221.1.5 below PwC's estimate for Auckland Airport's entire business (including unregulated activities) of 6.99%;[442]

A221.2 within the range of recent overseas regulatory WACC decisions for airports, after normalising for differences in risk-free rates, made by:

A221.2.6 the CAA in the UK (6.11% for Heathrow Airport and 6.42% for Gatwick Airport); and

A221.2.7 the Commission for Aviation Regulation (CAR) in Ireland (6.09% for Dublin Airport).

Are there any additional factors relevant to Auckland Airport's overall target return?

A222 To avoid cherry-picking, we consider that any factor which we accept as justifying an increase above our mid-point WACC estimate should be considered by the other airports regulated under Part 4 when assessing whether an adjustment, either upwards or downwards, may be appropriate for their target return.

A223 BARNZ indicated the proportion of leisure-based travel may affect Auckland Airport's target return given Christchurch Airport's suggestion that it affects asset beta.[443] There is insufficient evidence currently before us to demonstrate that this should significantly impact Auckland Airport's target return.

A224 Financeability concerns have also been raised as a possible reason for targeting a higher return. Auckland Airport stated in its pricing disclosure that:[444]

> We forecast that targeting a return of 6.99% on Aeronautical Pricing Activities may require balance sheet support towards the end of PSE3 to retain our target A- long term credit rating from Standard & Poor's, particularly in light of the approx. $1 billion of works under construction that will build up on Auckland Airport's balance sheet over PSE3 for which we will receive no return in this period.

A225 NERA stated that ensuring financeability is a key concern for the financial sustainability of a company. It noted that where financial sustainability is at risk, companies may be discouraged from making new investments.[445]

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442 Auckland Airport has previously acknowledged that its unregulated services would be expected to have a higher post-tax WACC than its regulated services. Auckland International Airport Limited "Airport regulation and pricing - Issues Brief" (November 2006), page 5.

443 See footnote 407.

444 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 14.

A226 NERA noted that Auckland Airport forecasts the funds from operation to debt ratio (FFO/debt) to fall below the Standard & Poor (S&P) threshold of 12% for an A- rating. It stated that this implies a considerable risk to financeability, as S&P would downgrade Auckland Airport when the ratio is below the threshold at the time of its rating review, entailing an increase in Auckland Airport's cost of debt.[446]

A227 However, this does not suggest our WACC estimate is inappropriate. The key question is how Auckland Airport chooses to fund its capex programme to balance various factors, including its dividend policy and credit rating. Auckland Airport notes that it has "a number of capital management levers" available to maintain its A- credit rating "including raising equity".[447]

A228 In addition:

A228.1 as noted by Dr Small (for BARNZ), "regulators and rating agencies look at a wide range of factors when assessing financeability and credit ratings, but NERA use only one measure (FFO/debt)";[448] and

A228.2 as noted by Macquarie Research, "S&P has the ability to look beyond the period in question and if there is a clear path to a sustained recovery in this metric (ie, higher aeronautical pricing in PSE4 underpinning stabilised/improving cash flow) it could elect to maintain the existing rating".[449]

Our conclusion regarding Auckland Airport's target return on priced services

A229 Based on the evidence before us, we consider that Auckland Airport's target return of 6.99% has not been sufficiently justified.

A230 In our view, Auckland Airport has not demonstrated that its expected operating leverage over PSE3 will be sufficiently higher than the average of the companies in our asset beta comparator sample. Little evidence has been presented to directly support the magnitude of Auckland Airport's asset beta estimate.

A231 In addition, Auckland Airport's approach of focussing on estimates of its own asset beta (rather than a comparator sample-based approach) leads to a significant risk of estimation error, particularly given the observed beta is of the whole airport company where over 80% of the company value is associated with unregulated revenues. Therefore, the implicit adjustment it has made to our asset beta estimate of 0.60 has not been sufficiently justified.

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445 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 25.

446 NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 26.

447 Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 14.

448 John Small "Response to NERA on WACC for AIAL (13 April 2017), paragraph 32.

449 Macquarie Research "Auckland International Airport – A story of three halves" (October 2017), page 14.

A232 Despite this, we consider the observed asset beta as shown in Figure A8 gives some weight to Auckland Airport's view that an appropriate asset beta could potentially be higher than our mid-point estimate.

A233 However, despite all of the described difficulties of assessing the implications of the observed asset beta estimates, we consider Auckland Airport's observed asset beta does have some relevance as a reference point. We consider the observed asset beta gives some weight to Auckland Airport's view that an appropriate asset beta could potentially be higher than our mid-point estimate.

A234 Nonetheless, we do not consider this information can, by itself, justify a departure from our mid-point WACC estimate. In our view, asset beta estimates for a single company and over a limited period of time are not sufficiently reliable. We also note the significant influence of unregulated revenues on Auckland Airport's asset beta, which further reduces the reliability of this estimate.[450]

A235 We consider the available evidence suggests our cost of debt estimate of 4.41% is reasonable and we have used this when assessing Auckland Airport's profitability. We consider that the 20 basis point increase Auckland Airport applied to its cost of debt, between its draft and final pricing decisions, has not been fully justified. In any event, there is a small difference between our estimate of 4.41% and Auckland Airport's estimate of 4.52% and the impact of this difference on the overall WACC is relatively immaterial (two basis points).

[450] We note that the Enterprise value of Auckland Airport has grown significantly compared to the regulated asset base (RAB). The value of the RAB is currently approximately 10-15% of the total enterprise value of Auckland and has been shrinking as a proportion for a number of years. An increasing proportion of value associated with non-aeronautical (unregulated) services is likely to increase asset beta of the whole company without necessarily affecting the asset beta of regulated services.

Attachment B Our assessment of forecasts affecting Auckland Airport's expected returns

Purpose

B1 This attachment contains our analysis and conclusions on Auckland Airport's values and forecasts affecting its profitability. This includes its forecast asset values, demand, operating expenditure, capital expenditure, and RLC.

B2 This analysis influences our assessment of the extent to which Auckland Airport's target returns are likely to promote the long-term benefit of consumers, which is discussed in **Chapter 2**.

B3 Consistent with section 52A(1)(b) of the Act, we also consider the extent to which Auckland Airport is improving its operating efficiency and providing services at a quality that reflects consumer demands.

Conclusions

B4 Overall, we consider that Auckland Airport's opening and closing (forecast) investment values, forecast demand, and forecast operating expenditure do not raise concern that the airport would be expected to extract excessive profits. Accordingly, we have used these values and forecasts as a basis for assessing Auckland Airport's expected profitability.

B5 We consider Auckland Airport's opening and closing (forecast) investment values are appropriate to use as the basis for our profitability analysis because:

B5.1 Auckland Airport's approach to disclosing its asset values appears reasonable and consistent with our Information Disclosure and Input Methodology determinations;

B5.2 its ongoing disclosures of these values are subject to auditor and director certification, which provides reassurance; and

B5.3 Auckland Airport's disclosure of its carry forward adjustments is consistent with IM and ID Determinations.[451] In particular, Auckland Airport's revaluation moratorium adjustment:

B5.3.1 appears to be an appropriate use of the mechanism to account for ongoing differences between the disclosed asset values and those used for setting prices; and

[451] Auckland Airport has two carry forward adjustments – the revaluation moratorium and recovery of revenue for Pier B development, deferred from previous pricing periods. Consistent with the ID Determination, Auckland Airport has provided explanations for these carry forward adjustments and discussed stakeholders' views on these adjustments. Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 51-53.

B5.3.2 allows the opening and closing investment values to better reflect the present value of the expected remaining cash flows from the assets.

B5.4 Auckland Airport has stated it would treat revaluations associated with the moratorium as an offset to income when revaluations are included in the asset base for pricing purposes.[452]

B6 Regarding Auckland Airport's forecast demand:

B6.1 based on submissions received, we consider that Auckland Airport's overall demand forecast for PSE3 is unlikely to result in excessive profits;

B6.2 we consider it not unreasonable that over PSE3, annual demand growth exhibits a slowdown compared to 2016 and 2017 (where demand growth was exceptional) but is relatively similar to that experienced over the earlier years of PSE2; and

B6.3 we consider that some sharing of risk between airports and airlines for the volumes associated with route development activities (and costs) is appropriate and this appears to be occurring.

B7 Regarding Auckland Airport's forecast operating expenditure:

B7.1 Auckland Airport's PSE3 operating expenditure is forecast to increase compared to historical levels, although on a unit basis it does not appear unreasonable relative to historic levels – over the whole PSE3, operating expenditure per passenger is lower than over the whole PSE2;

B7.2 Auckland Airport's historical operating expenditure performance indicates pressure on quality of services may continue in PSE3, however this does not appear to be of concern over the long-term (this is also discussed in **Chapter 3** – Capital expenditure); and

B7.3 Auckland Airport's historical operating expenditure performance provides context for its PSE3 forecast but does not necessarily indicate that the starting point for the PSE3 forecast is unreasonable.

B8 In **Chapter 2**, we discuss our expectation of Auckland Airport earning $8m in revenue (today's dollars) above our mid-point WACC estimate from its second runway assets. This expectation of an increase in asset value arises due to the airport targeting a return above our mid-point WACC estimate with the precise amount dependent on the level of the RLC.

B9 The role of the RLC is to bring the additional revenue, associated with the holding costs of second runway assets, forward in time. The RLC itself, as proposed by

[452] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 17.

Auckland Airport, does not raise concern about the airport earning excessive profits over PSE3. This is because:

B9.1 Auckland Airport has undertaken a detailed assessment of the need for the second runway and stakeholders generally agree that the second runway will ultimately be necessary;

B9.2 Auckland Airport intends to offset the revenues from the RLC against the carrying value of the assets being held for future development of the runway;

B9.3 the pre-requisite for introducing the RLC (investment confirmed and significant development undertaken before RLC is levied) reduces the risk of a long-lag time between imposition of the RLC and actual use of runway; and

B9.4 we have the ability to comment on the airport's behaviour in future, which could include considering the impact of the airport abandoning the second runway project after introducing the RLC, a risk that is in our view, small.

B10 The airport could have made a clear commitment to introduce a mechanism (eg, a refund) to deal with any RLC revenues in the event the runway was abandoned. This may have helped alleviate airlines' concerns about the potential for excessive profits in these circumstances.

B11 Nonetheless, we consider the absence of such a commitment is of minimal concern for the reasons provided above.

B12 We do not consider that the RLC is inconsistent with the prudent acquisition of land, or the efficient commissioning of the second runway, or efficient pricing (discussed in **Chapter 4**).

B13 This conclusion on the RLC does not imply that a charge levied on assets held for future use would necessarily be appropriate in all circumstances. We have given consideration to the context and nature of the RLC in this particular circumstance and made conclusions on this basis. We would do the same for any future charge on assets held for future use.

Structure of this attachment

B14 This attachment discusses our approach to analysis and conclusions on whether Auckland Airport's forecasts and disclosures reflect an appropriate starting point for our assessment of expected profitability. In particular we have considered:

B14.1 Auckland Airport's opening and closing investment values, including the reasonableness of the airport's disclosed asset values and carry forward adjustments;

B14.2 its demand forecasts;

B14.3 its operating expenditure forecasts; and

B14.4 Auckland Airport's RLC and the treatment of its assets held for future use.

Opening and closing investment values

Recent amendments from the Input Methodology review

B15 The IM Review introduced a requirement for airports to disclose a forward-looking IRR for the current pricing period in the price setting event disclosure requirements. The IRR calculation includes an estimate of the opening and closing investment value.

B16 In its forward-looking IRR calculation, Auckland Airport's opening investment value for PSE3 reflects the initial capital to be recovered. It comprises of two items.

B16.1 The IM-compliant closing RAB from the ex-post disclosure of the year preceding the start of the current price setting event.[453]

B16.2 Any adjustments reflecting decisions made in previous price setting periods that have an impact on charges for a current pricing period. Auckland Airport has included a negative and positive carry forward adjustment, which are discussed below. Inclusion of these adjustments helps achieve consistency between the opening investment value and the forecast cash flows that are used in a forward-looking IRR calculation.

B17 In a forward-looking IRR calculation, the forecast closing investment value reflects the remaining capital to be recovered. It comprises of two parts.

B17.1 The forecast closing asset base used by airports when setting prices, reflecting an airport's assumed time profile of capital recovery; and

B17.2 Any adjustments reflecting decisions made by airports that affect charges for the current and future price setting events that are not already reflected in the forecast closing asset base. This helps to derive a forecast closing investment value that is a good reflection of the remaining capital to be recovered.

B18 As part of the IM Review, we stated that provided the opening and forecast closing investment values are determined in the manner discussed above, the forward-looking IRR of the current pricing event effectively links past and future pricing periods together. This allows for a profitability assessment that is a good reflection of an airport's pricing intent.[454]

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[453] Given that the 2017 closing RAB value (the year which precedes the start of PSE3) will not be available until after the PSE3 disclosure, the ID Determination requires the airport to use the closing RAB value from the most recent ex-post disclosure (in this case, 2016) rolled forward to the first day of the PSE3 period. See: Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), footnote 158, page 97.

[454] Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), pages 44–47.

Asset values

B19 This section considers the appropriateness of Auckland Airport's approach to valuing its RAB, and ultimately whether its asset valuation is an appropriate baseline to assess profitability against.

Auckland Airport's approach to valuing its priced assets

B20 Auckland Airport is applying a revaluation moratorium on its priced assets, which are used to set standard prices for airfield activities and certain specified passenger terminal activities. This means that revaluations are not included in the value of the asset base used to set prices for priced services.

B21 This revaluation moratorium was also applied during PSE1 and PSE2. In our analysis for the section 56G review, it was difficult to reconcile Auckland Airport's asset base used to set prices with the asset base disclosed under the ID Determination. This was because the airport disclosed its assets indexed using the consumer price index (CPI) as required under ID, but did not revalue its assets when setting prices at each price setting event.

Regulatory disclosure requirements

B22 As part of the IM Review in 2016, we amended the IM and ID Determinations such that airports could apply either CPI-indexation or an un-indexed approach when rolling forward the value of individual assets, depending on the approach applied in pricing. This applies to both land and non-land assets.[455]

B23 By allowing Auckland Airport to disclose its assets in a manner most consistent with the asset valuation approach used to set prices, these amendments sought to resolve the problem discussed above at paragraph B21.

Auckland Airport has valued its priced assets consistent with our IM and ID Determinations

B24 Auckland Airport is continuing the revaluation moratorium over the duration of PSE3 (1 July 2017 to 30 June 2022) and has not forecast any revaluations for its priced assets.

B25 Auckland Airport has disclosed its priced assets by:[456]

B25.1 restating the asset values provided most recently for information disclosure purposes (FY2016);

B25.2 removing all revaluations made since 2010 when the information disclosure regime began; and

[455] Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 208.

[456] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 17-19.

B25.3 removing revaluations between 2006 and 2010 in respect of land assets (to account for the revaluation moratorium that Auckland Airport introduced in 2007 for pricing purposes).

B26 Auckland Airport's disclosure of its asset valuation is consistent with current IMs and information disclosure requirements for airports. This includes changes made to the IM and ID Determinations, following the IM Review in December 2016, which:[457]

B26.1 allows airports to elect an approach to revaluing assets (ie, indexation or non-indexation) only at the beginning of a pricing period;

B26.2 requires airports to provide information on this revaluation approach and the forecast revaluation rate and value of revaluations that the airport has applied to an asset;

B26.3 requires airports to use the revaluation approach it used for price setting purposes in its ex-post disclosures; and

B26.4 allows airports to apply either indexation or non-indexation to parts of the asset base separately.

Other regulated assets

B27 Other regulated assets include land and specialised assets associated with those activities not covered by the standard prices (namely aircraft, freight, leased tenancies and collection facilities for duty free). Charges for these activities are set through agreements with individual customers.

B28 While other regulated assets do not form part of the price setting consultation, they are included in the total RAB. Therefore, we are interested in the way that other regulated assets have been valued and disclosed.

B29 As with PSE2, the revaluation moratorium does not apply to other regulated assets. Other regulated assets were disclosed at carrying value and indexed over the forecast period to provide opening PSE3 asset values. This is consistent with IM requirements.

Submitters' views

B30 Auckland Airport submitted that allowing it to reflect its revaluation moratorium in its disclosed asset values eliminated the previous mismatch between priced and other regulated asset values.[458]

B31 Generally, asset valuation has not been a key area of contention for submitters. BARNZ submitted that it had not identified any issues of concern with the asset values provided by Auckland Airport, but considered that given the materiality of the

[457] Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), pages 60–61.

[458] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 8.

asset values to target returns, it would be useful for us to review the asset values used.[459]

Conclusion

B32 Auckland Airport's approach to disclosing its asset values appears reasonable. Its ongoing disclosures of these values are subject to auditor and director certification, which provides reassurance.

B33 By reconciling its historic disclosed indexed asset values with the un-indexed values (revaluation moratorium) for each individual pricing asset, Auckland Airport's disclosures:

B33.1 help ensure that our forward-looking and backward-looking profitability assessments are consistent; and

B33.2 provide enough transparency for us and interested persons to assess whether Auckland Airport is limited in its ability to earn excessive profits.

B34 This is because if the revaluation moratorium ends and CPI-indexed asset valuations form the basis of prices, we expect the revaluation to be treated as an offset to income. The indexed asset values would need to be reconciled with the revaluation moratorium at this time to verify this offset occurred. Auckland Airport has stated it would treat revaluations as offset to income when revaluations are included in the asset base for pricing purposes.[460]

B35 We consider Auckland Airport's disclosed asset values are appropriate and have used these as the basis for our profitability analysis.

Opening and closing carry forward adjustments to asset values

B36 During the IM Review, we considered how to transparently reflect that an airport's pricing decision in one period could impact on a future price setting period.

B37 We introduced a carry forward mechanism in the ID Determination that allowed an airport to recognise commitments made in prior pricing period that would impact the prices of another pricing period (eg, risk allocated adjustments).

B38 The introduction of the carry forward mechanism was intended to provide greater transparency around the targeted profitability of airports and to improve the ability of interested persons to assess if airports are targeting excessive profits.

Auckland Airport's approach to the carry forward adjustments

B39 Auckland Airport has adjusted its opening asset valuation through a carry forward adjustment made up of:

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459 BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 12.

460 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 17.

B39.1 a positive adjustment relating to the recovery of revenue for the Pier B development that was deferred from previous pricing periods (Pier B adjustment);[461] and

B39.2 a negative adjustment to account for the revaluation moratorium described above, providing for priced assets over the PSE3 period to reflect valuations in 2006 ("revaluation moratorium adjustment").

B40 The combined impact of these adjustments is to reduce the opening value for the pricing asset base by 7.2% (from $1.15b to $1.06b).[462]

B41 The revaluation moratorium adjustment is intended to be carried forward at the same value in future periods unless Auckland Airport decides to unwind the moratorium on asset revaluations in the future. It is therefore reflected in the closing carry forward adjustment.

B42 In contrast, the deferred revenue relating to the Pier B adjustment will be recovered during PSE3 and the value of the carry forward adjustment will be fully offset by the end of the pricing period. As such, there is no closing carry forward adjustment relating to the Pier B adjustment.

Submitters' views

B43 Auckland Airport states that no customers opposed the two carry forward adjustments described.[463] Consistent with this, BARNZ notes that it is comfortable with the Pier B adjustment and the revaluation moratorium adjustment.[464]

B44 Further, Auckland Airport noted that the inclusion of a carry forward mechanism in the ID Determination has enabled it to provide additional transparency about the ongoing impact of the revaluation moratorium – allowing it to clearly demonstrate the difference between its asset values under information disclosure regulation and its asset values used to set prices (due to the impact of the revaluation moratorium before the start of information disclosure regulation).[465]

B45 There have been no additional concerns raised about the Pier B adjustment or the revaluation moratorium adjustment during the submission process to date.

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461 Pier B is part of the airport's international terminal and is being extended. The Pier B adjustment maintains the revenue profile that has been in place since PSE1, which provided for planned under-recovery of the Pier B development during PSE1 and then an over-recovery during PSE3.

462 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 20.

463 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 12.

464 BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 9.

465 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 8.

Conclusion

B46 The revaluation moratorium adjustment (and Auckland Airport's disclosure of it) is consistent with IM and ID Determinations. This adjustment:

B46.1 does not allocate risk but appears to be an appropriate use of the mechanism to account for ongoing differences between the disclosed asset values and those used for setting prices; and

B46.2 allows the opening and closing investment values to better reflect present value of the expected remaining cash flows from the assets.

B47 We note that the Pier B adjustment is an example of a risk sharing arrangement that the introduction of a carry forward mechanism (in the ID Determination) sought to provide greater transparency about. The Pier B adjustment came into effect in PSE1, prior to the introduction of a carry forward mechanism. At the time, it was less clear how the Pier B adjustment impacted future price setting periods.

B48 Auckland Airport has not proposed other carry forward mechanisms to adjust the default risk allocation between itself and airlines for the current pricing period. This means the airport will bear all of the risks or rewards if outcomes differ from forecasts. Note that further consideration of potential use of risk allocation adjustments is included in **Chapter 3** (Capital expenditure).

B49 We have not made any adjustments to Auckland Airport's disclosed opening and closing carry forward values as part of our profitability assessment in **Chapter 2**.

Demand forecasts

B50 This section considers whether Auckland Airport's demand forecasts for the PSE3 period are reasonable, based on the information available at the time prices were set. Demand forecasts directly impact the reasonableness of the airport's forecast revenues, and therefore influence our assessment of whether the airport is limited in its ability to extract excessive profits.

Regulatory disclosure requirements

B51 Under information disclosure regulation, airports are required to report on demand forecasts used to calculate the total revenue requirement over the five-year pricing period. This includes:

B51.1 annual and busy hour forecasts of international and domestic passenger arrivals and departures;

B51.2 international transit and transfer passengers (as applicable); and

B51.3 aircraft runway movements by busy hour, busy day and financial year, expressed in total maximum certified take-off weight (MCTOW) and number of aircraft.

B52 Airports are also required to provide an additional five years of forecast passenger, aircraft numbers and MCTOW demand.

Differences between forecast demand and actual demand impact profitability

B53 An airport's demand forecasts are a key determinant of the prices it sets, and through this, are a key determinant of its actual profits. This is because prices are set by assuming a volume forecast for each charged service. Setting a price path (combined with the volume forecast) only to recover the airport's target revenue forecast is consistent with not targeting excessive profits.

Demand may vary from forecast due to factors in and outside airports' and airlines' control

B54 Auckland Airport may have an incentive to under-forecast the demand used to derive its prices so as to earn higher profits. If volumes are then higher than assumed, Auckland Airport will receive higher total revenue and likely higher returns.

B55 Notwithstanding this, actual volumes will likely vary from forecast volumes due to factors outside the airport's control, such as international policy and economic growth. These variations may be positive or negative. Actual volumes may also exceed forecast volumes due to Auckland Airport's efforts in attracting additional passengers and aircraft over the PSE3 period.

B56 Auckland Airport submits that it "encourage[s] the Commission to assess Auckland Airport based on our real-world conduct rather than by reference to theoretical incentives (eg, to adopt conservative forecasts)".[466] Similarly, the New Zealand Airports Association comment that "the Commission fails to note that airlines have an incentive to be optimistic in their forecasts to minimise prices",[467] while noting that "the Commission should be very cautious about reopening the demand forecasts used by airports when they have been developed by airports and rigorously tested with independent experts and airlines."[468]

B57 We maintain that airports may have an incentive to under-forecast demand to earn higher profit than that forecast. We also acknowledge that airlines may have a counter incentive to over-forecast demand, or to be less forthcoming about prospective reductions in services, to benefit from lower prices. More broadly, we consider that there are forecasting risks that arise from factors beyond both airlines' and airports' control.

Auckland Airport's approach to forecasting demand

B58 Auckland Airport states that its demand forecasts are based on the methodology from an independent expert, DKMA, and that these forecasts are immaterially different from its internal budget. This is with the exception of international

466 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 8.

467 NZ Airports Association "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 46.

468 NZ Airports Association "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 45.

passenger forecast, where the (higher) budget estimate is adopted for FY2018 and is forecast to return to the DKMA estimate by FY22.[469]

B59 DKMA carried out demand forecasts for pricing purposes, as well as peak demand forecasts to assist facility planning over the short, medium, and long-term (including the timing of the second runway).[470] In its submission, Auckland Airport highlights that given the interdependence between these forecasts, this approach provided it with "a unified set of forecasts based on independent advice and informed by airline feedback and economic and industry commentary." It also noted that this differs to the approach taken in PSE2 where separate forecasts were developed for pricing and facilities planning purposes.[471]

B60 Auckland Airport suggests that this alignment provided it with incentives to ensure demand forecasts were the most accurate and reasonable, given changes to demand forecast would affect the level of capital expenditure required over PSE3 and PSE4 and impact the estimated timing of the second runway commissioning.[472]

Airlines have not raised material concerns with Auckland Airport's demand forecasts

B61 Overall, airlines have not raised material concerns with Auckland Airport's demand forecasts or suggested alternative forecast assumptions.

B62 Auckland Airport notes that during its consultation with airlines, PSE3 demand forecasts were not a significant area of debate.[473]

B63 BARNZ considered that Auckland Airport's demand forecasts appear to be reasonable, while noting that individual airline submitters have access to better passenger forecast information than it does.[474]

B64 Air New Zealand considered the DKMA methodology, which Auckland Airport used to forecast demand, to be sound. However, it noted its own forecasts were slightly higher than those developed by DKMA, with growth tapering off (back towards longer term averages) under the DKMA forecast faster than it considered appropriate. Air New Zealand said it was unable to determine whether that

469 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 14-15.

470 For more information on the demand forecast methodology see: Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 85-88.

471 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 14.

472 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), page 14.

473 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 90.

474 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 9.

difference was appropriate or not because it does not have access to other airlines' forecasts.[475]

B65 In its cross-submission on our *Process and Issues paper*, Air New Zealand reiterated this view, noting there is a risk that demand forecasts remain soft, possibility allowing for over-recovery.

Risk sharing of demand forecasts

B66 Air New Zealand submits that its preferred approach to dealing with demand forecast uncertainty was to introduce a risk sharing mechanism. The proposed mechanism would limit the airport's exposure to down-side risk as well as allow airlines to benefit from any up-side to eventuate. Air New Zealand notes that this was proposed in response to the airport's concerns that the DKMA forecast contained significant down-side risk to the Airport.[476]

B67 Auckland Airport did not support Air New Zealand's risk sharing proposal.[477]

B68 Further details on Air New Zealand's proposed risk sharing mechanism were not provided. However, we note that, depending on the specifics, a mechanism which allows existing airlines to benefit from any up-side risk may not incentivise the airport to proactively attract new air services (which would provide competition to the existing airlines) for the benefit of consumers.

Route development activities

B69 Nonetheless, it does appear that some sharing of demand risk is occurring. Auckland Airport acknowledge that unlike PSE2, the PSE3 demand forecasts "were unconstrained and did not exclude more speculative demand (consistent with the approach of including a share of route development costs [in the operating expenditure forecast], which are regarded as necessary to deliver the forecast demand)."[478] Route development costs are associated with the promotion of new international routes and airlines, with the intention of increasing passenger and aircraft volumes at Auckland Airport.

B70 Based on this, it appears that Auckland Airport has included in its forecast, volumes contingent on route development activities with a higher degree of uncertainty attached to their occurrence and/or expected benefits than was included in the volume forecasts over PSE2.

B71 Airlines have not provided comment on this approach, though Auckland Airport notes that Air New Zealand provided a statement of principle about the inclusion of

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475 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 30.

476 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 31.

477 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 25 and 31.

478 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 88.

route development costs in the operating cost forecast.[479] Route development costs are discussed in more detail in the next section: operating expenditure forecasts.

Our response

B72 We consider that some sharing of risk for volumes associated with route development activities (and costs) is appropriate. This is because the route development activities may increase demand relative to a situation where these activities were not undertaken. Airlines may subsequently benefit from lower unit costs resulting from these increased volumes and economies of scale over the long-term.

B73 Auckland Airport states that it spent $24.2m more than forecast on route development over PSE2 to stimulate growth, and compared to PSE2 forecasts, international passenger movements was 16.8% higher than forecast.[480] Auckland Airport has also forecast to maintain these additional passenger numbers into PSE3.

B74 This suggests that airlines may benefit from this expenditure in the long-term, though we acknowledge it is difficult to attribute forecast growth to route development.

Conclusion on the reasonableness of the demand forecasts

B75 Based on submissions, we consider that Auckland Airport's overall demand forecast for PSE3 is unlikely to result in excessive profits.

B76 While Air New Zealand has suggested some conservatism in Auckland Airport's demand forecasts, it has not suggested an alternative growth rate. We are therefore not able to quantify the impact of an alternative demand forecast. Despite this, it is reassuring that no other airlines have raised concern about these forecasts, particularly given Air New Zealand's statement that its inability to review other airlines' forecasts has prevented it from determining the appropriateness of the airport's demand forecasts.

B77 Nonetheless, we are able to consider the airport's historical demand growth (and how this compares to its forecast growth), and other relevant information that may inform reasonable expectations of future passenger demand at Auckland Airport. This is discussed below.

Demand growth over PSE2

B78 Auckland Airport has recently experienced significant growth in passenger demand. Over PSE2, total passengers was 17.2% higher than forecast. This variance was led by

[479] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 20.

[480] Auckland Airport "Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017", page 29.

17.7% higher domestic passenger movements and 16.8% higher international passenger movements.[481] Of particular note:

B78.1 11 new airlines have commenced operating at Auckland Airport between 2015 and June 2017;[482] and

B78.2 2016 and 2017 experienced passenger growth of 8.6% and 11.3% respectively.

B79 At the time of PSE2 forecasts, airlines considered those forecasts were a reasonable expectation of future demand. It is also worth recalling that these forecasts did not include demand associated with uncertain route development activities.

B80 We concluded during our section 56G review that "based on submissions, [Auckland Airport's] overall demand forecast for PSE2 is unlikely to result in excessive profits" and that "[Auckland Airport's] demand forecast for PSE1 was also reasonable."[483]

Demand growth projected over PSE3

B81 Auckland Airport is projecting average annual growth of 4.2% for international passengers and 3.2% for domestic passengers over the PSE3 period.[484] This represents a slowdown in demand growth compared to the PSE2 period where average annual growth was 6.0% for international passengers and 6.6% for domestic passengers.

B82 We acknowledge that some of the considerable growth over 2016-2017 may reasonably be due to 'one-off' type events – an assumption by DKMA who carried out the forecast.[485] For this reason, it does not appear unreasonable that over PSE3 annual demand growth is considerably less than that over 2016 and 2017 but relatively similar to the demand growth experienced over the earlier years of PSE2.

B83 BARNZ considers that volume forecasts for PSE3 appear reasonable, while acknowledging that in PSE2 the airport under-forecast revenues in all but one year (FY2013), driven by higher than forecast growth in passenger volumes.[486]

B84 We also note that a number of airlines informed Auckland Airport of future schedule reductions after the PSE3 pricing decision. Auckland Airport stated that this

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481 Auckland Airport "Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017", page 29.

482 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 89.

483 Commerce Commission "Report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Christchurch Airport" (13 February 2014), paragraph F79.

484 This growth compares to Auckland Airport's demand forecast for 2017, which it used for PSE3. Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 15.

485 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 89.

486 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 9.

"indicate[s] yield pressures for some existing capacity" but remains of the view that the forecasts are reasonable.[487] Given the airport's view, these schedule reductions may not represent a meaningful down-side risk, though we note that we have not been informed of specific up-side risks in submissions.

B85 Lastly, MBIE has forecast international visitor arrivals to New Zealand to grow by an average of 4.5% a year over the 2018- 2022 period. This forecast is not significantly different to the 4.2% international passenger growth Auckland Airport has forecast over the same period. Though we note these forecasts are not directly comparable.[488]

Operating expenditure forecasts

B86 This section considers whether Auckland Airport's operating expenditure forecasts for the PSE3 period are reasonable, based on the information available at the time prices were set. Similar to demand forecasts, operating expenditure forecasts influence our assessment of whether the airport is limited in its ability to extract excessive profits because they are a key driver of forecast cash flows.

B87 Consistent with section 52A(1)(b) of the Act, we have also considered whether Auckland Airport has incentives to improve its operating efficiency and provide services at a quality that reflects consumer demands.

Incentives on Auckland Airport to forecast its expenditure and to operate efficiently

B88 Auckland Airport's operating expenditure forecast influences the prices it charges customers. When actual expenditure is lower than forecast, Auckland Airport can earn higher profits. Auckland Airport can outperform its forecast expenditure by:

B88.1 achieving efficiency gains: reducing operating expenditure while maintaining (or increasing) the quality and quantity of service provided or increasing the quantity or quality of service while maintaining the operating expenditure; and

B88.2 forecasting operating expenditure above an efficient level so as to earn higher profits by outperforming operating expenditure forecast without necessarily being efficient.

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487 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 90.

488 MBIE's forecast of international visitors to New Zealand does not directly forecast Auckland Airport's international passengers: MBIE's forecast includes any international visitors that do not go through Auckland Airport and does not include New Zealanders travelling overseas via Auckland Airport. Nonetheless, we expect the growth rate of New Zealanders travelling overseas not to vary considerably from the growth rate of international visitors to New Zealand; economic growth is a strong driver of both. Therefore, we consider that MBIE's forecast provides a reasonableness check of Auckland Airport's forecast of international passenger growth. MBIE's forecasts are based on econometric modelling, current trends and best available forecasts of international factors and have been developed with input from members of the tourism industry. They can be found at: http://www.mbie.govt.nz/info-services/sectors-industries/tourism/tourism-research-data/international-tourism-forecasts/2017-2023-forecasts.

B89 Auckland Airport may also be less incentivised to achieve efficiency gains in the last year of the pricing period. This may result in a higher expenditure starting point, from which operating expenditure forecasts will be based on for the following pricing period.

B90 Over time, the public disclosure of information on historic and forecast operating expenditure provides transparency about whether Auckland Airport has over-forecast operating expenditure for the purpose of price setting and its performance relative to other suppliers. The availability of this information potentially increases the countervailing power of consumers at Auckland Airport.

How Auckland Airport has forecast operating expenditure

B91 Auckland Airport forecast the company-wide operating costs for the PSE3 period (FY2018 – FY2022) using a forecast for the year ending 30 June 2017 as the baseline. Specific adjustments were made to this baseline to reflect any anticipated changes (positive or negative) over the PSE3 period. Cost drivers were estimated to establish PSE3 forecasts for each key area of operating expenditure.

B92 Auckland Airport states that its operating expenditure forecast seeks to achieve realistic per passenger reductions in operating cost items. However, the airport also notes that it is not realistic to expect continuing per passenger reductions in all operating cost line items across all time, particularly due to:

B92.1 the complexity created during brownfields developments and periods of high construction; and

B92.2 the intensive development the airport is facing after a long period of experiencing economies of scale – Auckland Airport considers its cost base has been highly efficient for a long time compared to global airport comparators (this is discussed below).[489]

B93 Auckland Airport notes that it considered requests from airline customers to both increase and reduce service levels, and after quantifying the cost impact of these requests and testing proposals with customers, made changes to the operating cost forecasts where it considered that was appropriate. [490]

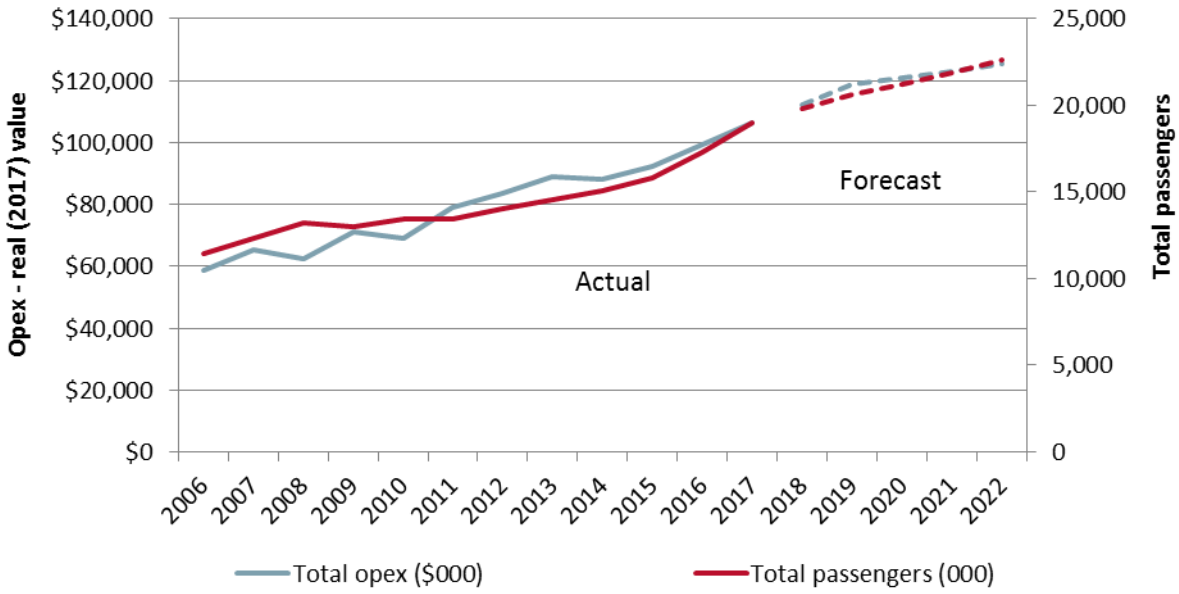
[489] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), pages 37-38.

[490] Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: response to process and issues paper" (28 November 2017), pages 37-38.

Forecast trends in operating expenditure against forecast trends in demand

B94 Figure B1 below shows that real operating expenditure and demand are both forecast to increase over PSE3.

Figure B1 Operating expenditure and demand growth (2006 – 2022)



Forecast trends in per unit operating expenditure

B95 Auckland Airport stated that forecast operating expenditure per passenger over the PSE3 period is effectively flat in real terms, relative to its FY2017 forecast.[491] Auckland Airport had originally stated in its PSE3 disclosure that operating costs per passenger were forecast to reduce in real terms over the PSE3 period. However, Auckland Airport revised its conclusion, noting it had found a small error in its operating cost information after BARNZ queried this analysis in its submission.[492]

491 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 21.

492 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 15.

B96 The forecast trend in unit operating expenditure at Auckland Airport, relative to actuals for PSE1 and PSE2, are shown below in Figures B2 and B3 below.[493] We consider operating expenditure per passenger and operating expenditure per aircraft are appropriate measures of Auckland Airport's unit operating expenditure as they are likely to reflect some of the drivers of Auckland Airport's variable costs.[494]

Figure B2 Operating expenditure per passenger (2006 – 2022)

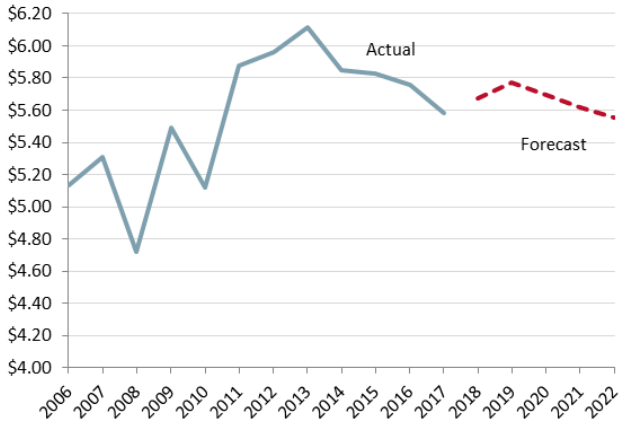
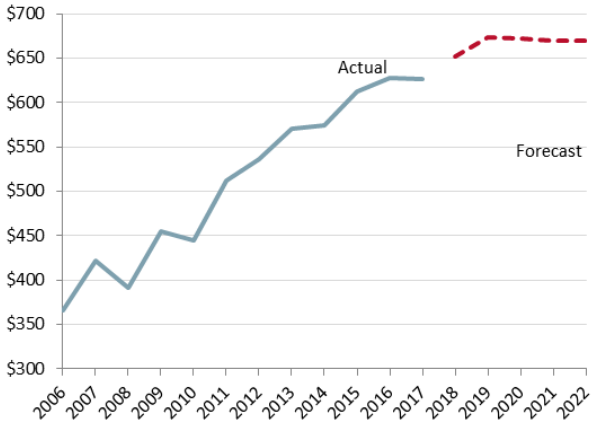


Figure B3 Operating expenditure per aircraft movement (2006 – 2022)



Note: Dollars shown are in real (2017) value. Sources: Auckland Airport "Identified Airport Activities Disclosure Financial Statements" 2006 to 2010; Auckland Airport "Specified Airport Services Annual Information Disclosure" 2011 to 2017

Operating expenditure per passenger

B97 Figure B2 shows that over PSE3, Auckland Airport's real operating expenditure per passenger is forecast to initially rise above 2017 levels, and then decline, so that by 2022 it is broadly consistent with 2017 levels ($5.55 compared to $5.58).[495] As shown in Figure B1, real operating expenditure and passengers are both forecast to increase year-on-year over PSE3. Initially, real operating expenditure is expected to increase by more than forecast passenger growth.

B98 By 2020, real operating expenditure and passenger numbers are forecast to rise, but at a decreasing rate and real operating expenditure per passenger declines because the reduction in real operating expenditure growth is greater than the reduction in passenger growth.

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493 Based on information provided by Auckland Airport, we have assumed in our analysis of demand forecasts and operating expenditure per passenger forecasts that Auckland Airport's disclosure of inbound and outbound international passengers is exclusive (net of) transit and transfer passengers. This is inconsistent with the way Auckland Airport has disclosed this information in the past and with the ID Determination, which require inbound and outbound passenger numbers to be inclusive (gross) of transit and transfer passengers.

494 Changes in operating expenditure per aircraft movement may reflect changes in the size and capacity of aircraft.

495 Our analysis uses actual 2017 operating expenditure. There is an insignificant difference between actual 2017 operating expenditure and Auckland Airport's estimate of 2017 operating expenditure at the time it set prices for PSE3 ($106.2m compared to $106.5m respectively).

B99 Over the whole PSE3 period, real operating expenditure per passenger is forecast to be $5.66. This compares to $5.81 over the 2013-2017 (PSE2) period.

Operating expenditure per aircraft movement

B100 Figure B3 shows that real operating expenditure per aircraft movement is also forecast to marginally increase over 2018-2019 and then gradually decline, so that by 2022 it is above 2017 levels ($669.86 compared to $625.97).

B101 Over the whole PSE3 period, real operating expenditure per aircraft movement is forecast to be $667.43. This compares to $602.92 over the 2013-2017 (PSE2) period.

Comment on forecast unit operating expenditure

B102 Overall, Auckland Airport's operating expenditure forecast for PSE3 does not appear unreasonable relative to historic levels. While PSE3 operating expenditure per aircraft movement rises above PSE2, this is also driven by changes in aircraft size and capacity. The forecast operating expenditure per passenger end-point is not significantly different than that in PSE2, and over the whole PSE3, operating expenditure per passenger is lower than over the whole PSE2.

B103 However, airlines have raised concerns that the forecast starts from a historically high base. This is discussed below.

Airlines consider the starting point for the operating expenditure forecast is inefficiently high

B104 BARNZ stated that Auckland Airport's current operating expenditure is inefficiently high, and that this means the starting point for the PSE3 operating expenditure forecast is also inefficiently high (supported by Air New Zealand).[496]

B105 BARNZ also submits that expenditure may look similar to historic levels, but that does not mean expenditure is necessarily efficient; only that efficiency is not getting worse. BARNZ states that the regulatory review should carry out benchmarking and analysis to determine whether the starting expenditure levels were efficient. It suggests that without this, it is not possible for interested persons to know whether the airport is delivering efficient services.

B106 Related concerns about actual and forecast operating expenditure outpacing CPI and inefficient expenditure were also raised. Specifically:

B106.1 BARNZ noted that over the FY2006-FY2022 period, the airport's operating expenditure per passenger has increased/is forecast to increase by an average of 0.5% per year above CPI.[497] Similarly, Air New Zealand noted that

[496] BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 13. Air New Zealand stated that it supports the submission made by BARNZ, in particular its assessment of airports' operational costs. Air New Zealand "Review of Auckland and Christchurch Airport's third price setting events – cross-submission on process matters" (12 December 2017), paragraph 11.

[497] BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 13.

operating expenditure per passenger has remained flat over the past five years, and is forecast to marginally increase, despite a forecast increase in total passenger numbers. Air New Zealand considered it was difficult from information disclosed to tell precisely why this is.[498]

B106.2 BARNZ raised concern that Auckland Airport is passing on its inefficient costs (including diseconomies of scale) to airlines and passengers, and noted that "it is not clear that the pricing / regulatory framework provides any meaningful incentives for airports to seek out operating efficiencies."[499] While Air New Zealand suggested that operational efficiencies are being captured rather than shared with consumers, noting that in any other business, particularly one with high fixed costs such as an airport, marginal costs would decrease with increased scale.[500]

B106.3 Qantas stated that:[501]

> [it is] still very concerned with the level of proposed operating expense growth rates over the pricing period; especially the large increase in 2018 ... Operational cost increases well above CPI provides little incentive for innovation, demonstrate efficiency or economies of scale which is reasonably expected.

Our response to airlines' concerns

B107 As discussed, Auckland Airport's operating expenditure forecast for PSE3 does not appear unreasonable relative to historic levels. In particular:

B107.1 the forecast operating expenditure per passenger end-point is not significantly different than that over PSE2;

B107.2 the forecast operating expenditure per passenger over the whole PSE3 is marginally lower than over the whole PSE2; and

B107.3 the projected growth in real operating expenditure is more than offset by forecast passenger growth from 2020 onwards.

B108 Therefore, in response to airlines' concerns we focus our analysis on whether there is evidence to suggest the starting point for the PSE3 forecast may be unreasonable, by exploring:

B108.1 how Auckland Airport's actual operating expenditure compares to its operating expenditure forecasts over PSE1 and PSE2, and the reasons for any over or under performance; and

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498 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 36.

499 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 18.

500 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 36.

501 Qantas "Review of Auckland and Christchurch Airports' third price setting events – Qantas Group feedback to the Process and issues paper" (28 November 2017), page 1.

B108.2 how Auckland Airport's operating expenditure compares to other airports.

B108.3 In response to BARNZ suggestion to carry out benchmarking, we note that the performance indicator of efficiency is not the focus of this review, and is better assessed as part of a review of ex-post annual disclosures. We consider it preferable to commence an ex-post analysis of airports' performance against a complete five-year pricing period for all three regulated airports (Auckland, Wellington and Christchurch) after Wellington Airport has completed its first five-year pricing period in mid-2019.

How Auckland Airport's historical operating expenditure compares to its operating expenditure forecasts

Historic trends in unit operating expenditure

B109 Auckland Airport had forecast unit operating expenditure to decline over PSE2, relative to PSE1 performance. We stated in our section 56G review that "… the efficiency gains forecast for PSE2 may be reasonable, although airlines have raised concerns that the forecast starts from a historically high base."[502]

B110 Figure B4 and Figure B5 below show that unit operating expenditure at Auckland Airport has varied over PSE1 (2007-12) but has trended upwards until the start of PSE2 (2013), where operating expenditure per passenger peaked at $6.11 and then began trending downwards. This downward trend appears to be primarily driven by the material increases in passenger growth over the second half of the pricing period.

Figure B4 Operating expenditure per passenger (2006 - 17)

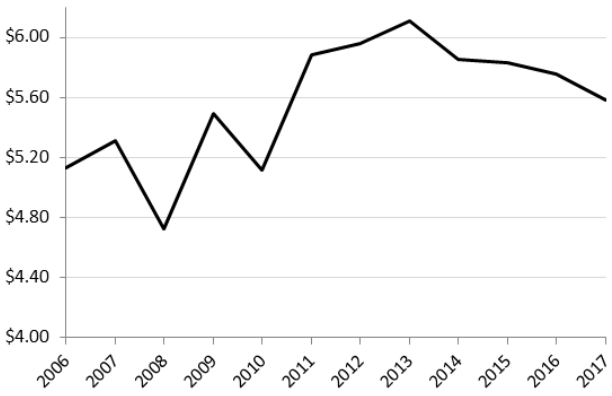
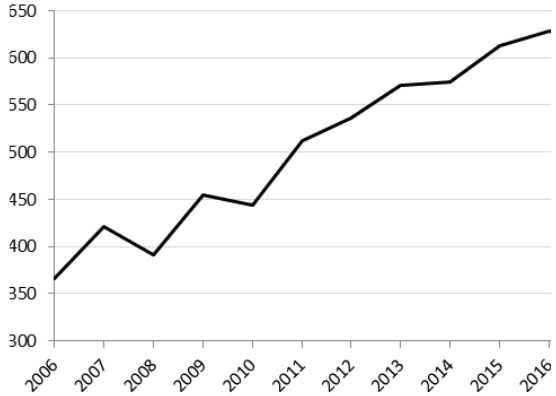


Figure B5 Operating expenditure per aircraft movement (2006 - 17)



Note: Dollars shown are in real (2017) value. Sources: Auckland Airport "Identified Airport Activities Disclosure Financial Statements" 2006 to 2010; Auckland Airport "Specified Airport Services Annual Information Disclosure" 2011 to 2017.

[502] Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013), paragraph G28.

Comparison between actual and forecast operating expenditure

B111 Total operating expenditure per passenger over PSE2 exceeded the forecast by about $61m or 14.8%. However, it did trend downwards as illustrated in Figure B6 below.

Figure B6 Forecast and actual operating expenditure per passenger (2013 – 17)

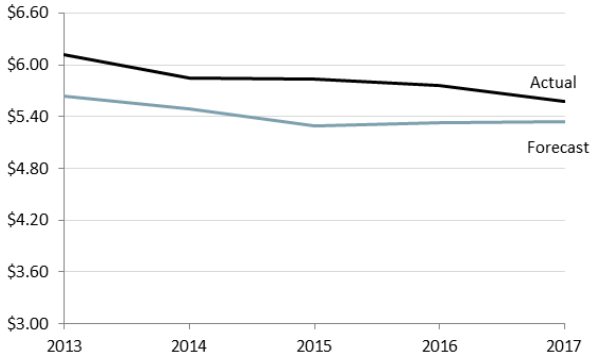
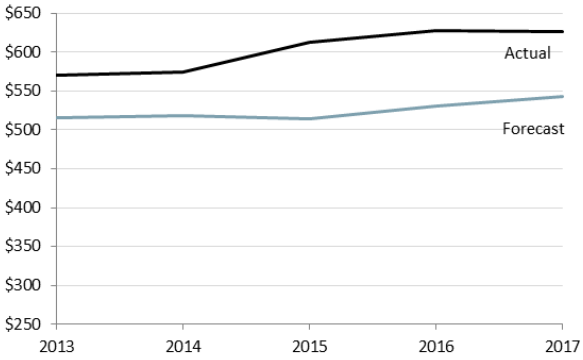


Figure B7 Forecast and actual operating expenditure per aircraft movement (2013 – 17)



Note: We have not included PSE1 for comparison purposes because PSE1 forecast operating expenditure excluded aircraft and freight costs and leased areas.[503] Dollars shown are in real (2017) value.

B112 Auckland Airport has attributed the majority of this additional expenditure to:

B112.1 Marketing, promotions and public relations - corporate overheads (44% of the additional expenditure). This relates to route development costs that Auckland Airport spent to promote new international routes and airlines, with the intention of increasing passenger and aircraft volumes at Auckland Airport.

B112.2 Personnel costs - corporate overheads (32% of the additional expenditure). Auckland Airport cites changes to its corporate structure and more resources in relation to (or due to): increases in passenger growth, health and safety legislation, a need for an extended human resources function, and marketing and airport development.[504]

B112.3 Other costs associated with asset maintenance including repairs and maintenance, and consultancy, audit and legal costs.

B113 The drivers of the PSE2 operating expenditure variance are similar to the drivers of operating expenditure variance over PSE1 where actual operating expenditure

503 Comparisons between forecast and actual operating expenditure over PSE1 can be found in: Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013), page 113.

504 Auckland Airport "Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017", page 30.

exceeded forecasts by 13.4%[505] and Auckland Airport attributed over half of this variance to route development costs.[506] We noted in our section 56G review that unit operating expenditure in PSE1 both increased and exceeded the PSE1 forecast in 2011 and 2012, even when the unforeseen costs associated with Auckland Airport's route development activities were excluded.[507]

B114 This differs somewhat to the operating expenditure trend over PSE2 - unit operating expenditure exceeded the forecast (even after excluding the higher marketing, promotions and public relations expenditure), while declining over the period.

How Auckland Airport's operating expenditure compares to other airports

B115 Airlines' submissions have not suggested an alternative PSE3 forecast for total operating expenditure or particular operating expenditure items. Rather, airlines have queried whether differences between Auckland Airport's operating expenditure and that of other airports are reasonable.

B116 In this regard, Auckland Airport state that "Airline feedback during the pricing consultation generally sought reductions in the base year forecast without any reduction in the level of service that underpinned this forecast and with limited engagement on any specific cuts that should be made to the base year forecast.[508]

Airlines' views on how Auckland Airport's operating expenditure compares to other airports

B117 BARNZ considers that compared to other New Zealand airports, Auckland Airport has high operating expenditure per passenger, high corporate operating expenditure per passenger and high maintenance operating expenditure as a proportion of RAB value.[509]

B118 BARNZ provides several observations comparing Auckland Airport's operating expenditure to that of other NZ airports:

B118.1 Auckland Airport's operating expenditure per passenger is higher than Queenstown and around double that of Wellington Airport. While it is below Christchurch Airport, Christchurch Airport has forecast its operating

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505 The PSE1 operating expenditure comparison excludes aircraft and freight costs and leased areas because these costs were not included in the operating cost base for PSE1 forecast. As such, the 13% variance over PSE1 is not directly comparable with the variance in actual and forecast operating expenditure over PSE2, which did include these costs in the forecast.

506 Other reasons cited for the additional expenditure were: regulatory costs associated with the implementation of information disclosure, repairs and maintenance expenditure, increases in the cost of cleaning contracts, and computer costs. See Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013), paragraph G23.

507 Commerce Commission "Final report to the Ministers of Commerce and Transport on how effectively information disclosure regulation is promoting the purpose of Part 4 for Auckland Airport" (31 July 2013), paragraph G5.

508 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 20.

509 BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), table 2 row 7, page 13.

expenditure per passenger to decline back towards FY2012 levels over PSE3. If this happens (which is not certain) it would leave Auckland Airport as the outlier; although BARNZ also recognises Christchurch Airport has a much newer terminal asset to maintain.[510]

B118.2 Auckland Airport's asset maintenance operating expenditure as a percentage of RAB is around five times higher than at Christchurch or Wellington Airport. This variance may be partly due to higher maintenance requirements at Auckland, but it is not clear to BARNZ whether this is the case.

B118.3 Auckland Airport's corporate overheads operating expenditure per passenger is higher than at Christchurch Airport and more than double that at Wellington Airport.

B118.4 Auckland Airport's asset management and airport operations operating expenditure per passenger is lower than at Christchurch or Wellington. It is not clear how much of this relates to different expenditure profiles and how much to the airports allocating expenditure to different categories.[511]

B118.5 Auckland Airport is spending less on airfield operating expenditure per MCTOW landed than both Wellington and Christchurch Airport, but is spending more on terminal operating expenditure per passenger. It seems that the terminal is driving Auckland Airport's higher operating expenditure, which could reflect the older nature of the buildings and/or additional cost associated with expansion.[512]

B118.6 Auckland Airport has substantially higher remuneration and benefits costs per full-time equivalent (FTE) employee than Wellington and Christchurch Airport. It is not clear if this is due to higher salaries being paid or Auckland Airport including additional costs within this disclosed item.[513]

B119 BARNZ also notes that operating expenditure per passenger in Australian airports appear to have been growing significantly. However, BARNZ considers that the reasons given for growing operating expenditure inefficiency in Australian airports differ from the reasons given for operating expenditure inefficiency in New Zealand airports.[514]

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510 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 13.

511 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 13.

512 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 14.

513 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 14.

514 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 17–18.

Auckland Airport's view on how its operating expenditure compares to other airports

B120 As part of reaching its pricing decision, Auckland Airport analysed how its operating costs have tracked over time and how these costs benchmark against other New Zealand airports and international airports. Auckland Airport identified the following conclusions from its benchmarking analysis:

B120.1 Auckland Airport's total real aeronautical operating costs per passenger have been falling since the start of PSE2, but the extent of unit reductions is becoming smaller over time;

B120.2 Auckland Airport's operating costs per passenger compare favourably with the other major New Zealand airports, taking into account Auckland Airport's significantly higher number and proportion of international passengers for which the complexity of operations increases the cost base; and

B120.3 Auckland Airport benchmarks well for operating cost efficiency. Auckland Airport ranks between the 37th and 40th lowest out of 50 global peers surveyed in terms of its operating expenditure per passenger, total costs per air traffic movement and total costs per passenger (this uses analysis in Leigh Fisher's Airport Performance Indicators 2016 Report).[515]

B121 In response to points raised by BARNZ, Auckland Airport has said that:

B121.1 "using analysis set out in Leigh Fisher's Airport Performance Indicators 2016 Report, we benchmarked our operating costs per passenger, total costs per air traffic movement and total costs per passenger...We remain of the view that our operating costs are efficient and benchmark well by international standards…"[516]

B121.2 "We acknowledge that benchmarking can be challenging and needs to take into account the different passenger mix at each airport. For example, although our operating cost per passenger is marginally higher than Sydney, Brisbane and Melbourne, our passenger mix is considerably different. As with the New Zealand market, we process a significantly higher proportion of international passengers than these comparator airports. Our operating costs are also lower per passenger than Perth Airport, despite the fact that our proportion of international passengers is almost 20% higher. Overall we remain of the view that our operating costs are efficient and benchmark well by international standards."[517]

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515 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 18.

516 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), pages 19-20.

517 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 20.

Conclusion

Auckland Airport's PSE3 operating expenditure forecast does not appear unreasonable relative to historic levels

B122 As noted above:

B122.1 the forecast operating expenditure per passenger end-point is not significantly different than that in PSE2;

B122.2 over the whole PSE3, operating expenditure per passenger is lower than over the whole PSE2; and

B122.3 the projected growth in real operating expenditure is more than offset by forecast passenger growth from 2020 onwards.

Auckland Airport's historical operating expenditure performance indicates pressure on quality of services may continue in PSE3

B123 Broadly speaking, it appears that the strong passenger growth over PSE2 has enabled economies of scale in some areas of expenditure, while placing pressure on other areas. This is consistent with:

B123.1 Auckland Airport stating that it has required additional peak support, experienced increased complexity, and applied temporary operational solutions to accommodate its construction programme in a live operational environment.[518]

B123.2 BARNZ noting that while Auckland Airport's operating expenditure per passenger decreased over PSE2, quality of service problems have increased and it may be that increasing congestion has meant the airport could not spend enough to maintain service quality for the increased passenger volumes.[519]

B124 On the other hand, A4ANZ has suggested that it would reasonably expect that the strong passenger growth experienced in recent years (and forecast to continue) would enable economies of scale, resulting in operational efficiencies.[520]

B125 We recognise that economies of scale may not be expected to be achieved when an airport is capacity constrained (such as the case for certain parts of Auckland Airport). We would expect significant capital works in a live environment to increase costs over the short term.

B126 As noted in **Chapter 3**, we consider there does not appear cause for significant concern around long-term quality at Auckland Airport given that:

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518 Auckland Airport "Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017", page 28.

519 BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 15.

520 A4ANZ "Submission - Review of Auckland International Airport's pricing decisions & expected performance (July 2017 - June 2022)" (29 May 2018), page 3.

B126.1 Auckland Airport's customer survey results are still reasonable and largely consistent with other airports;

B126.2 it appears that Auckland Airport's investment programme will address a number of quality concerns in the longer term; and

B126.3 it is reasonable to expect changes in quality during construction, and while new projects are coming online. We would be most concerned about any systematic degradation of quality that remains unaddressed, however there is no evidence of this.

Auckland Airport's historical operating expenditure performance provides context for its PSE3 forecast but does not necessarily indicate the starting point for the PSE3 forecast is unreasonable

B127 Overall, Auckland Airport's historical unit operating expenditure performance, relative to forecasts does not show clear signs of improvements in operating expenditure efficiency. On the other hand, it is not clear that operating expenditure inefficiencies are arising either.

B128 As noted by BARNZ, certain measures of Auckland Airport's operating expenditure performance indicate poorer performance compared to other New Zealand airports. However, these discrepancies in airports' performance have existed over PSE1 – PSE2 and have not changed remarkably to raise significant concern. We also acknowledge that differences in airports' passenger mix may contribute to differences in unit operating expenditure performance.

B129 While the variance between actual and forecast operating expenditure over PSE2 (particularly 2017) provides some context for the starting point of the PSE3 forecast, it does not necessarily indicate the starting point for the PSE3 forecast is unreasonable. In this regard, we note that:

B129.1 Higher corporate overheads were the main source of variance between actual operating expenditure and forecast operating expenditure over PSE2 (largely driven by higher route development costs and personnel costs). In 2017, corporate overheads were 68.5% more than forecast. Over PSE3, corporate overheads are forecast to grow slightly each year above this 2017 baseline.

B129.2 The apparent inclusion of more 'speculative' route development costs (and associated demand) should encourage less variation between forecast and actual operating expenditure in future (particularly in corporate overheads). This may improve transparency about whether Auckland Airport has over-forecast operating expenditure for the purpose of price setting and its performance relative to other suppliers.

B129.3 Asset maintenance expenditure over PSE2 exceeded forecasts by 3.5%. Over PSE3, asset maintenance is forecast to reduce from the 2017 baseline and grow slightly each year.

B129.4 Asset management expenditure over PSE2 was 2.3% less than forecast. Over PSE3, asset management and operations is forecast to increase from $27.1m in 2017 to $35.4m in 2018 (a 30.6% nominal increase), and then grow slightly each year.

We have tested the impact of Auckland Airport's operating expenditure forecast on our assessment of expected profitability

B130 We have tested the impact of a change in Auckland Airport's operating expenditure forecasts on its expected profitability.

B130.1 Increasing Auckland Airport's operating expenditure forecast by 10% would result in an expected return of 6.5%, which is a 0.6 percentage point decrease from our assessment of Auckland Airport's target return.

B130.2 Decreasing Auckland Airport's operating expenditure forecast by 10% would result in an expected return of 7.6%, which is a 0.6 percentage point increase from our assessment of Auckland Airport's target return.

The runway land charge and treatment of assets held for future use

B131 Auckland Airport is intending to build a second runway in 2028 to accommodate future growth. To recover the forecast holding costs on land being held for the runway (assets held for future use), the airport intends to introduce a RLC.

B132 In **Chapter 2**, we discuss our expectation that Auckland Airport will earn additional revenue above our benchmark (our mid-point WACC estimate) from its second runway assets. We also note that:

B132.1 this expectation of additional revenue arises due to the airport targeting a return above our mid-point WACC and irrespective of the RLC; the role of the RLC is to bring this additional revenue forward in time; and

B132.2 no other aspects of the RLC – as proposed by Auckland Airport – raise due concern that the airport could earn excessive profits over PSE3.

B133 This section discuss the RLC and treatment of assets held for future use in more detail, and our view that no other aspects of the RLC – as proposed by Auckland Airport – raise due concern that the airport could earn excessive profits over PSE3.

Description of the runway land charge

B134 Auckland Airport is intending to build a second runway to accommodate future growth. The second runway is currently forecast to be commissioned in 2028. Auckland Airport has decided to introduce a RLC "to help provide a sustainable price path for the second runway development over time".[521]

[521] Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

B135 The RLC will be $1.19 + GST per passenger. Auckland Airport states that the RLC will be introduced no earlier than July 2020 and only once its Board of Directors have:[522]

B135.1 determined that Auckland Airport has spent more than $50 million associated with the development of the second runway (from the start of PSE3 onwards); and

B135.2 resolved to proceed with construction of the second runway.

B136 Auckland Airport states that the RLC will recover the forecast holding costs on the land to be used for the initial stage of the second runway. The airport considers calculating the charge on this basis is a conservative approach as it is yet to be determined if a full or staged runway development is optimal.[523]

B137 Auckland Airport states the RLC will be a NPV neutral charge (at the airport's cost of capital) that will be tracked in a transparent way over time against the carrying value of its assets held for future use.[524]

Regulatory treatment of assets held for future use

B138 The land that Auckland Airport is currently holding to develop the second runway is classified as 'assets held for future use' under the ID Determination.[525]

B139 Assets held for future use are excluded from the disclosed RAB and from associated disclosed profitability measures until they are used in the supply of specified airport services.[526]

B140 Airports can expect to be able to earn a full return on and of the costs of holding and developing this land without profits appearing excessive, provided the land is eventually commissioned for use to supply airport services.[527]

B141 The IM Determination establishes that the value of assets held for future use is determined by the formula:[528]

base value + holding costs – net revenue – tracking revaluations

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522 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

523 A staged approach would potentially see an initial stage runway of 2,265m followed by a final stage runway of 2,983m. Auckland Airport has undertaken analysis of the land parcels associated with enabling the initial stage of the second runway, and has determined that these parcels represent 68% of the total land held for future use value. Building a full-length runway in one stage also remains a possible option.

524 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

525 Such land is also referred to as excluded assets, land held for future use and future development land.

526 *Airport Services Input Methodologies Determination 2010* [2016] NZCC, clause 3.1 and definition of "excluded assets".

527 Commerce Commission "Input methodologies (Airport Services) reasons paper" (December 2010), paragraph 4.3.74.

528 *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.11.

B142 The treatment of assets held for future use, in particular future development land, recognises the incentives that the treatment might create under information disclosure regulation. Airports should not have an incentive to acquire land imprudently, nor to hold land indefinitely without developing it.

B143 Requiring that land is being used before it enters the RAB places the risk of non-development on airports (ie, profits will appear excessive if airports attempt to earn a return on the value of the land before it is developed in order to supply specified airport services).[529] Given that airports are best placed to manage the risk of non-development, it is reasonable that they are the ones that are required to bear it.

Changes in our 2016 Input Methodology review

B144 In our 2016 Input Methodology Review, the Information Disclosure Determination was amended such that airports disclose the value of, and revenue from or associated with, assets held for future use on a forecast basis. This change was intended to make it easier to assess the impact revenues associated with assets held for future use have on the expected profitability of regulated airport services.

B145 The amendments provided for revenue, associated with assets held for future use, to be disclosed in one of two ways in an airport's pricing disclosure:

B145.1 in a separate assets held for future use section (where an airport chooses to price in a way that revenues associated with assets held for future use can be separated from revenues associated with the RAB); or

B145.2 as part of the carry forward adjustment (where an airport chooses to price in a way that revenues associated with assets held for future use cannot be separated from revenues associated with the RAB).

B146 We noted this change:[530]

B146.1 creates transparency as it allows us and other interested persons to assess an airport's profitability taking into account revenues associated with its RAB only;

B146.2 means there would be no immediate expectation of excessive profits resulting from upfront recoveries related to revenues from assets held for future use (assuming an appropriate return is targeted on the assets included in the RAB); and

B146.3 provides for a mechanism that can minimise the price shock when the asset enters the RAB upon commissioning (as at that time the carrying value of the assets held for future use would be net of any associated revenues).

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529 That said, the risks for airports are modest under an information disclosure regime, not least because land could potentially be sold, given that it has a value in an alternative use. Any residual risk relates to holding and development cost.

530 Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 574.

B147 We also indicated that although we considered that revenues associated with assets held for future use are not part of disclosed regulatory income, in our summary and analysis of price setting event disclosures we would test the impact of those revenues on the airport's profitability based on the RAB.[531] This is provided in paragraphs B195 to B198 below.

Regulatory basis of the RLC

B148 A number of submitters have commented on the ability of Auckland Airport to introduce an assets held for future use charge under the Airport Authorities Act 1966 (AAA).

B149 In its submission, Air New Zealand raised an issue about the legality of the charge under the AAA.[532] Auckland Airport responded to this issue in its cross-submission.[533]

B150 It is not within the Commission's functions under Part 4 of the Act to monitor or rule on the airport's compliance with the AAA. Accordingly, we do not express a view on this issue.

Approach to disclosing the RLC

B151 Auckland Airport has used the 'assets held for future use cost and base value' section of its pricing disclosure to account for forecast revenue from the RLC.[534]

B152 We stated in the IM Review:[535]

> Given that the forecast balance of the assets held for future use has been specifically designed to account for revenues associated with assets held for future use, in general, we consider the use of it to account for such circumstances more appropriate [than using the carry forward mechanism].

B153 Therefore, we support the approach that Auckland Airport has used to disclose forecast revenue from the RLC.

Ability to extract excessive profits

B154 An assets held for future use charge would lead to excessive profits if, over the lifetime of the assets (and all other things being equal), it resulted in returns above an airport's WACC relative to the value of those assets.[536]

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531 Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 583.

532 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraphs 38-39.

533 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), pages 16-17.

534 Commerce Commission "Specified Airport Services Information Disclosure Requirements Information Templates" (20 December 2016), section 18(ix).

535 Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 561.

536 Assuming those higher returns were not justified by superior performance.

B155 In **Chapter 2**, we discuss that the role of the RLC is to bring additional revenue forward in time (this additional revenue arises due to the airport targeting a return above our mid-point WACC). Having considered submitters' comments on the RLC, we have concluded that no other aspects of the RLC – as proposed by Auckland Airport – raise due concern that the airport could earn excessive profits over PSE3. This is because:

B155.1 the airport intends to offset any revenues against the carrying value of the assets held for future use;

B155.2 there is agreement between the airport and the airlines that the runway needs to go ahead, and evidence that the airport undertook detailed assessment of need for, and commissioning date of, the runway;

B155.3 the pre-requisite for introducing the RLC (investment confirmed and significant development undertaken before RLC is levied) reduces the risk of a long-lag between imposition of the RLC and actual use of runway

B155.4 there is some risk excessive profits would arise in a situation where Auckland Airport abandoned the second runway project after the RLC had been triggered;

B155.5 we consider the risk of excessive profits arising in this situation to be small given stakeholders appear to be in agreement that the second runway will ultimately be required and a very significant change in circumstances would be required for the project to be abandoned; and

B155.6 if such a situation did arise, we have the ability to comment in future reviews on any concerns raised by the airport's behaviour.

B156 Because Auckland Airport's RLC holds these characteristics, we do not agree with A4ANZ, who suggest the RLC represents 'pre-funding' that is inconsistent with IATA guidelines.[537] In particular, IATA describe charges which amount to 'pre-funding' as potentially resulting in airlines and their passengers paying for the same facilities twice through both infrastructure improvement/development charges and depreciation costs already included in charges.[538] This is not the case for the second runway; the RLC revenue will be offset against carrying value of the assets held for future use, rather than representing an additional charge that means airlines are "paying twice".

B157 We note that in response to our draft report, airlines have maintained their opposition to the RLC.[539] In particular, BARNZ suggests that in the absence of any

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537 A4ANZ "Cross Submission - Review of Auckland International Airport's pricing decisions & expected performance (July 2017 - June 2022)" (25 June 2018), page 3.

538 See https://www.iata.org/policy/Documents/pre-funding.pdf.

539 A4ANZ "Cross Submission - Review of Auckland International Airport's pricing decisions & expected performance (July 2017 - June 2022)" (25 June 2018) page 2. Air New Zealand "Submission on draft report for review of Auckland International Airport's pricing decisions and expected performance (July 2017 - June 2022)" (29 May 2018) page 4. BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing

compelling reason for the RLC to be introduced, the strongly-expressed consumer preference to pay for the runway when it is built, and not before, should be given prominence in assessing whether the charge is reasonable and in consumers' interests.[540]

B158 We do not necessarily consider there are compelling reasons for the RLC that advance the long-term interests of consumers (relative to the runway being funded at a later date). But we do not think the RLC raises concern about excessive profits and inefficient pricing that are at odds with the long-term interests of consumers. Importantly, this does not imply that a charge levied on assets held for future use would be appropriate in all circumstances. We have given consideration to the context and nature of the RLC in this particular circumstance, and made conclusions on this basis. We would do the same for any future charge on assets held for future use.

B159 We set out our reasoning for these conclusions below.

NPV-neutrality

B160 Auckland Airport states that the RLC represents a NPV neutral charge that will be tracked in a transparent way over time against the carrying value of Auckland Airport's assets held for future use.[541]

B161 We support Auckland Airport designing the RLC as an NPV neutral charge and its commitment to tracking the charge in a transparent manner.

B162 As noted in the IM Review:[542]

> Where an airport chooses to price in a way that revenues associated with assets held for future use can be separated … there would be no expectation of excessive profits resulting from a special levy (assuming an appropriate return is targeted on the assets included in the RAB).

B163 We note that Auckland Airport's treatment of the RLC is NPV neutral based on its own cost of capital. The IM Determination allows airports to use their own cost of capital estimate when calculating the holding costs of assets held for future use.[543] This is because, under section 53F(1)(b) of the Act, regulated suppliers that are subject to only information disclosure regulation, such as airports, do not have to apply any IMs we have set for evaluating or determining the cost of capital.

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decision" (29 May 2018),page 6. Qantas Group "Qantas Group's Response to Draft Report on Auckland Airport's PSE3 Pricing Decision" (29 May 2018),page 1.

540 BARNZ "Response to Draft Report on Auckland Airport's PSE3 pricing decision" (29 May 2018), page 6.

541 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

542 Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 574.

543 Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), paragraph C10.6.

B164 In the event an airport adopts a target return above what we consider to be justified, this higher target return will also be reflected in the holding costs of assets held for future use and in their future carrying value (in accordance with the valuation formula set out in paragraph B141). In effect, excessive profits could be capitalised into the value of assets held for future use.

B165 **Chapter 2** and **Attachment A** consider whether Auckland Airport's target cost of capital is justified and concludes that Auckland Airport has not sufficiently justified its target return on its priced services of 6.99%.

B166 Auckland Airport is forecasting the value of its assets held for future use as $390m at the end of PSE3. However, using our benchmark cost of capital when determining the forecast assets held for future use value would result in a closing value at the end of PSE3 of $379m.

B167 As discussed in **Chapter 2**, we estimate that by using the airport's estimate of cost of capital in its roll forward of assets held for future use, the value of these assets at the end of PSE3 could be as much as $10m greater than if Auckland Airport had used our mid-point cost of capital (or about $8m in today's dollars). This represents an additional 3% in the expected value of the assets held for future use.

RLC relationship to building blocks

B168 BARNZ stated in its submission that because "the runway land charge is being treated as revenue outside of the building blocks allowance…all of this revenue [is] excessive".[544]

B169 We do not agree with this statement from BARNZ. The RLC is covered by the building blocks framework as it will be tracked over time against the carrying value of the associated assets held for future use. Any revenue from the RLC will be assessed against Auckland Airport's target return and the value of the assets held for future use once those assets are commissioned.

B170 We therefore do not consider that revenue from the RLC can be considered excessive for the reason claimed by BARNZ.

Impact of substantial delay or abandonment

B171 One area where a risk of excessive profits might arise is in the case of substantial delays or even abandonment of the second runway project after the RLC has been triggered but before the runway has been commissioned.

B172 Air New Zealand noted in its submission that Auckland Airport "provides no mechanism to account for delays or abandonment of the second runway".[545] BARNZ

[544] BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 13.

[545] Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 46.

has also noted that "if demand drops after FY21 and the runway is delayed, airlines could end up paying the charge for years before the runway is commissioned".[546]

B173 A4ANZ suggests that the RLC (which provides the airport with an upfront pool of money) does not encourage investments to be delivered in a cost effective and timely manner.[547]

B174 Auckland Airport responded to these points in its cross-submission. It noted that during its pricing consultation it had introduced the construction-based trigger to respond to airline concerns that changes in demand could result in customers paying the RLC for an extended period of time without any runway being constructed.[548]

B175 However, Auckland Airport went on to acknowledge that it had not turned its mind to what would happen if the RLC was triggered and then construction of the runway was delayed.[549] It stated: "If such a scenario does occur, Auckland Airport will consult with the airlines and do the right thing in the circumstances, keenly aware that the reasonableness of that decision will be assessed by the Commerce Commission."[550]

B176 The introduction of the trigger means that the second runway investment will have been confirmed and significant development work undertaken before the charge is levied. We agree with Auckland Airport that this will help manage the risk of airport customers being charged for the second runway for an extended period in the event an investment decision is delayed.

B177 We also note that Auckland Airport has undertaken a detailed assessment of the need for the second runway. It notes in its pricing disclosure:[551]

> Auckland Airport has sought expert advice on the latest timing forecast for the second runway based on the demand forecasts used for pricing and facility planning, and an analysis of certain operating parameters and estimates of when delay on the existing runway will exceed international benchmarks for acceptable delay. This advice recommends that Auckland Airport plans to commission a second runway in 2028.

B178 This should provide some reassurance to Auckland Airport's customers that the RLC is being levied with a clear commissioning date for the second runway in mind, reducing the risk of the charge being levied for an extended period prior to commissioning.

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546 BARNZ "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), page 16.

547 A4ANZ "Cross Submission - Review of Auckland International Airport's pricing decisions & expected performance (July 2017 - June 2022)" (25 June 2018), page 3.

548 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 17.

549 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 17.

550 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 17.

551 Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

B179 Nevertheless, given Auckland Airport's commitment to offset revenues from the RLC against the carrying value of the assets held for future use, we do not consider a delay to the second runway project would lead to excessive profits in PSE3.

B180 However, in the event that the project was abandoned after the RLC triggers had been met, it is not clear whether Auckland Airport intends to return any RLC revenue collected to customers (and if it does, how it intends to do this). A failure to return RLC revenue collected in the case of the project being abandoned would mean Auckland Airport has earned excessive profits.

B181 We recognise the probability of such a scenario occurring is low, noting that stakeholders appear to be in agreement that the second runway will ultimately be required (see 'Timing of acquisition' section below). A very significant change in circumstances would be required for Auckland Airport to abandon the second runway project after already making a decision to proceed with its construction. If such a situation did arise, we have the ability to comment in future reviews on any concerns raised by the airport's behaviour.

B182 Nevertheless, had the airport made a clear commitment to introduce a mechanism (eg, a refund) to deal with any RLC revenues collected in the case the second runway project was abandoned, this may have helped alleviate residual concerns about the potential for excessive profits to be extracted in these circumstances.

Timing of acquisition

B183 This section considers the incentives created by the RLC with respect to the acquisition of assets held for future use.

B184 As we noted in the IM Review:[552]

> The treatment in the IMs of assets held for future use, in particular future development land, recognises the indirect incentives that the treatment might create under information disclosure regulation. Airports should not have an incentive to acquire land imprudently, nor to hold land indefinitely without developing it.

B185 In its submission, Auckland Airport stated the RLC "does not create any concerns about Auckland Airport having "indirect incentives" to imprudently acquire or hold land. We understand that all parties agree that it is prudent for Auckland Airport to hold this land for the second runway development."[553]

B186 This statement appears to be supported by other submitters. Air New Zealand noted in its submission that it "accepts that a second runway at Auckland Airport will become necessary at some stage".[554] BARNZ said in its submission it agreed "it is

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552 Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 544.

553 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: submission on process and issues paper" (28 November 2017), page 18.

554 Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 37.

prudent for Auckland Airport to hold the land for the second runway and start the planning process for its development".[555]

B187 Given stakeholders agree it is prudent for Auckland Airport to hold this land for the development of the second runway (and indeed the land has already been acquired), we are not concerned about the RLC creating incentives to acquire land imprudently.

Timing of commissioning

B188 This section considers the incentives created by the RLC with respect to the efficient commissioning of the second runway.

B189 Under the IM Determination, airports face an incentive to develop new assets in a timely manner as the value of those assets does not become part of the RAB (for information disclosure purposes) until the asset is commissioned.[556]

B190 Some submitters have raised a concern that the ability of Auckland Airport to earn revenue on an asset prior to its commissioning (as is the case with the RLC) may impact this incentive.

B191 In an expert report on behalf of BARNZ, Munro Duignan noted that the availability of higher revenue prior to completion of the second runway could result in Auckland Airport setting a later completion date than it would set in the absence of a RLC. Munro Duignan stated such a charge could also reduce the incentive for Auckland Airport to expedite completion of the second runway once it has made the decision to construct it.[557]

B192 However, there does not appear to be universal support for this idea amongst airlines. Auckland Airport noted that during its pricing consultation Air New Zealand had suggested that "once airlines are paying a charge, pressure would build on the airport to develop the asset".[558] This raises the possibility that the opposite effect to that considered by Munro Duignan could also be true.

B193 Provided Auckland Airport treats revenues from the RLC as an offset against the carrying value of the assets held for future use, we are satisfied that the RLC should not alter the incentives the airport faces to commission the second runway at an appropriate time. We are therefore not currently concerned about the impact of the RLC on Auckland Airport's incentive to commission the second runway efficiently.

B194 We can continue to monitor the airport's behaviour with respect to the timing of commissioning the second runway and comment in future reviews if we have concerns, as can the airlines.

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555 BARNZ "Cross-submission on the Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper – issues and questions" (15 December 2017), paragraph 20.

556 *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.1 and definition of "excluded assets".

557 Munro Duignan "Report on Issues Regarding Auckland Airport's Runway Land Charge" (28 November 2017), page 2.

558 Auckland Airport "Section 53B review of Auckland Airport's price setting disclosure for PSE3: cross-submission on process and issues paper" (19 December 2017), page 17.

Materiality testing of the RLC

B195 We agree with Auckland Airport's intention to offset the revenue from the RLC against the carrying value of the assets held for future use.

B196 We have tested the impact of including net revenues from the RLC in forecast cash flows of the expected return. This provides an indication of the unlikely situation where implementation of the RLC does create excessive profits in the event that outcomes are not consistent with the guidance given and commitments made by Auckland Airport (eg, if the second runway project is subsequently abandoned or Auckland Airport does not offset revenues from the RLC against the carrying value of the assets held for future use).

B197 If net revenues from the RLC were to be included in our estimate of forecast cash flows, this would result in an expected return of 7.3%, which is a 0.2 percentage point increase from our assessment of Auckland Airport's target return of 7.1%.

B198 We have not placed any weight on this result in forming our conclusion on Auckland Airport's expected profitability.

Attachment C Methodology for our profitability assessment

Purpose

C1 This attachment describes our methodology for our assessment of Auckland Airport's profitability discussed in **Chapter 2**.

C2 Our profitability analysis has been published alongside this report.

Profitability assessment methodology

C3 We have estimated Auckland Airport's expected return for PSE3 on its total RAB as 7.1%. This estimate is based on our understanding of Auckland Airport's forecasts and consistent with its disclosed target return of 7.06%. All estimates of expected returns generated from our own analysis are provided to one decimal place.

C4 Consistent with our approach to assessing airport profitability outlined in the IM Review, we calculated an IRR forecast when assessing the returns targeted by Auckland Airport over the PSE3 period. This required information on Auckland Airport's:

C4.1 opening investment value;

C4.2 forecast cash flows over the duration of the pricing period; and

C4.3 forecast closing investment value.[559]

C5 In a forward-looking IRR calculation, the opening investment value reflects the initial capital to be recovered. It comprises:

C5.1 the IM-compliant closing RAB value from the ex-post disclosure of the year preceding the start of the current price setting event; and

C5.2 any adjustments reflecting decisions made in previous price setting periods that have an impact on charges for the current pricing period. This is important in order to achieve consistency between the opening investment value and the forecast cash flows that are used in a forward-looking IRR calculation.[560]

C6 The forecast cash flows over the duration of the pricing period comprise:

C6.1 revenues;

C6.2 operating expenditure;

[559] Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 163.1.

[560] Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 152.

C6.3 capital expenditure; and

C6.4 tax.[561]

C7 In a forward-looking IRR calculation, the forecast closing investment value reflects the remaining capital to be recovered. It comprises:

C7.1 the forecast closing asset base used by airports when setting prices, reflecting an airport's assumed time profile of capital recovery; and

C7.2 any adjustments reflecting decisions made by airports that affect charges for the current and future price setting events that are not already reflected in the forecast closing asset base. This is important in order to derive a forecast closing investment value that is a good reflection of the remaining capital to be recovered.[562]

We have confirmed Auckland Airport's disclosed target return by undertaking our own modelling

C8 Our assessment of Auckland Airport's expected return is consistent with Auckland Airport's disclosure of its expected returns. However, in determining our assessment of Auckland Airports expected returns we have not relied solely on Auckland Airport's own estimate or modelling.

C9 We have created our own profitability model based on our profitability analysis carried out in relation to Auckland Airport's PSE2 disclosure. This has been updated to reflect recent amendments to the IM and ID Determinations resulting from the IM Review (for example, cash flow timing and carry forward adjustments – see **Attachment D** for more information).

C10 The purpose of undertaking our own modelling is to confirm whether Auckland Airport's disclosure of its target return is consistent with the methodologies and approach used in the IM and ID Determinations. In addition, our own modelling allows us to test identified scenarios and sensitivities. Finally, our analysis allows us to estimate the revenues that would be required to support returns other than the airport's target cost of capital.

C11 Our profitability analysis has used Auckland Airport's information disclosures, as required under the ID Determination and its pricing model as key inputs. However, our analysis differs slightly to Auckland Airport's assessment of its return due to some minor simplifications in our modelling.

C12 In particular, our estimate of Auckland Airport's loss on disposals uses a simplified adjustment for the proportionate difference between the regulatory tax and accounting value of assets. This is because Auckland Airport's asset values have been

[561] Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 153.

[562] Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 155.

modelled in a more complex manner with a number of values. This simplification results in a slight difference between our estimate of Auckland Airport's unlevered tax than that disclosed by Auckland Airport. However this has no identifiable impact on our estimate of Auckland Airport's expected return.[563]

Adjustments to our analysis since PSE2 to reflect recent outcomes from the IM Review

C13 We have updated how we estimate the revenues required to support a target cost of capital. This is to reflect Auckland Airport's opening and closing carry forward adjustment to the RAB and to account for new cash flow timing assumptions.

C14 We have adjusted the calculation of the regulatory investment value to reflect the impact of the opening and closing carry forward adjustments when estimating the revenue required to target an IM-compliant cost of capital. We have assumed change from the opening carry forward adjustment value to the closing carry forward adjustment value is spread evenly over time. This results in target revenues that support a target return that is consistent with our mid-point WACC estimate to one decimal place.

C15 We have also introduced cash flow timing factors, in order to reflect that our IRR calculation now included specifically defined cash flow timing assumptions for revenues and costs. Prior to the IM Review, all cash flows were assumed to occur at year end.

Assumptions made in capital expenditure sensitivity analysis

C16 When testing alternative capital expenditure scenarios, we have made assumptions about the impact that any changes to capital expenditure forecasts will have on the forecast asset base. We outline these key assumptions, and our reasoning for these, below.

C17 Our analysis uses Auckland Airport's disclosed depreciation and revaluation values as inputs rather than deriving depreciation and revaluations using rates. This is because airports are not required to disclose information underpinning the calculation of depreciation and revaluations to the level of detail we have used in our analysis.

C18 When testing alternative capital expenditure scenarios, we have assumed that total depreciation as a proportion of opening RAB in each year remains consistent between the base case assumption and our capital expenditure scenario testing. We consider it reasonable that variations in capital expenditure forecasts would not have a significant impact on the effective depreciation rate for each asset category. This approach is consistent with our analysis for PSE2 where we made a similar assumption.

C19 We have assumed our capital expenditure scenarios have no impact on total revaluations. Auckland Airport does not include any revaluations to its priced assets but does include CPI based revaluations to its other regulated assets. The significant

[563] We report outcomes from our analysis to one decimal place, which is the only reason our assessment appears to be different from Auckland Airport's disclosed return of 7.06%.

majority of Auckland Airport's capital expenditure relates to its priced asset base and other regulated assets are a relatively small proportion of the total asset base. Given this, we do not expect this simplifying assumption to have a significant impact when testing alternative capital expenditure scenarios.

Attachment D Have recent amendments as part of the IM Review improved the transparency of airports' profitability?

Purpose

D1 This attachment considers how effective recent amendments to the IM and ID Determinations have been in improving the transparency of Auckland Airport's expected profitability.

Recent amendments to the IM and ID Determinations

Internal rate of return and carry forward mechanism

D2 We amended the Airports ID Determination to require airports to disclose a forward-looking profitability indicator by using an IRR calculation that comprises:

D2.1 an opening investment value at the beginning of the pricing period;

D2.2 a forecast closing investment value; and

D2.3 forecast cash flows over the duration of the pricing period.[564]

D3 The amendments also supplement the IRR with a carry forward mechanism that can be used to adjust the opening investment value and the closing investment value to better reflect an airport's pricing intent and that can take into account multiple pricing periods. [565]

D4 These amendments were introduced to enable greater transparency for interested parties to better understand an airport's approach to pricing and, in particular, whether the airport is limited in its ability to extract excessive profits.

Stakeholder views

D5 Auckland Airport notes that the recent amendments to the IM and ID Determinations have enabled it to provide increased transparency about Auckland Airport's pricing approaches and therefore it considers that they have been effective at increasing the transparency of target profitability.

D6 Auckland Airport used the IRR disclosure template to share information with airlines through the pricing consultation process, noting that it provided a consistent tool that allowed airlines to understand the impact of our proposals and final decision.

D7 Auckland Airport states that the new requirement for it to disclose the difference between its target return on the subset of priced services covered by standard charges and the effective return across total regulated services, will be valued by interested parties who requested this breakdown of forecast information.

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564 Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016).

565 Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), Table 3.1.

D8 Auckland Airport submits that the inclusion of a carry forward mechanism in the ID Determination has enabled it to provide additional transparency about the ongoing impact of the revaluation moratorium. It notes that this has allowed Auckland Airport to clearly demonstrate the difference between its information disclosure and pricing asset values (due to the impact of the moratorium before the start of ID regulation).

D9 BARNZ and Air New Zealand both comment favourably on the changes:

D9.1 BARNZ notes that Schedules 18 and 19 have been helpful in assessing the target profitability of Auckland Airport;

D9.2 Air New Zealand submits that the amendments to the IM and ID Determinations have increased the transparency of target profitability of airports; and

D9.3 Air New Zealand also submits that requiring airports to disclose targeted profitability in respect of both the total RAB, and the priced assets has increased the transparency of Auckland Airport's target profitability for interested persons not party to the consultation process.

Our view

D10 The IRR disclosure template was used to share information with airlines through the pricing consultation process. It has increased the transparency of Auckland Airport's targeted return on the subset of priced services covered by standard charges and its effective return across total regulated services.

Cost of capital

D11 As part of the IM Review we decided to change our approach to disclosing WACC, due to two main problems with the previous framework:[566]

D11.1 the upper limit of our WACC range had become the de facto benchmark when assessing airport profitability; and

D11.2 there was limited and weak rationale for using the 75th percentile as the upper limit of the WACC percentile range.

D12 We decided to remove the WACC range, and instead publish only the mid-point WACC and a standard error so that any required percentile can be calculated. We also required airports to explain and provide evidence to support the use of target returns above our mid-point cost of capital estimate.

Stakeholder views

D13 BARNZ notes that Auckland Airport's target percentile for PSE3 is lower than PSE2 and that it assumes this change is the result of the Commission's recent changes to the WACC IM.[567]

[566] Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph X4.

Our views

D14 Auckland Airport's target WACC percentile has decreased in PSE3 compared to PSE2. In PSE2, Auckland Airport's expected returns were at the 75th percentile of our WACC range; this has reduced to the 67th percentile for PSE3.[568]

D15 Auckland Airport's PSE3 disclosures have provided greater transparency regarding its forecast cost of capital, the return it has targeted through prices and the rationale for these when compared to its PSE2 disclosures. Auckland Airport has provided some justification for its target returns in its price setting event disclosures.

D16 The changes to the ID Determination have not provided as much transparency as we might have hoped.

D16.1 We consider that Auckland Airport has not provided sufficient evidence to justify its target return.

D16.2 Auckland Airport has not clearly explained differences between its WACC and our estimate of WACC because it has not provided its own alternative estimates of key WACC parameters such as asset beta (this required us to back-solve the value within our WACC framework). We consider that the specific magnitude of adjustment to each parameter is an important factor when considering whether the airport's approach is justified.

D16.3 We also note that some of the supporting information Auckland Airport was using to justify its return was not made publicly available through information disclosure (eg, its expert report by NERA).

D17 Therefore it would appear that the amendments have had some impact on Auckland Airport's approach to cost of capital and the transparency of its disclosures.

Asset revaluations

D18 The following amendments were made to both the IM and ID Determinations with respect to asset revaluations:

D18.1 requiring airports to disclose forward and backward-looking costs in a way that is most consistent to the approaches used when setting prices;

D18.2 limiting airports in their approaches to revaluing assets to the use of either CPI-indexation or an un-indexed approach (except when revaluing land using MVAU);

D18.3 allowing airports to make their choice of either CPI-indexation or an un-indexed approach for parts of the asset base separately;

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567 BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 12.

568 Based upon our assessment of Auckland Airport's 7.1% target return for PSE3 for its entire RAB (ie, priced and other regulated assets).

D18.4 allowing airports to apply alternative methodologies with equivalent effect where the application of the asset valuation IMs would prove prohibitively complex or costly (provided the alternative methodologies do not detract from the purpose of Part 4);

D18.5 allowing airports to elect an approach to revaluing assets only at the beginning of the next pricing period, and requiring airports to use the same approach in the ex-post disclosures; and

D18.6 requiring airports to provide details on the expected treatment of any revaluation gains in the next pricing period arising from a potential change in the approach to revaluing assets.

D19 The objectives of these changes were to provide:

D19.1 greater accuracy in the disclosures to better reflect an airport's pricing intent;

D19.2 greater clarity about the requirements in the Airport IM and ID Determinations;

D19.3 greater transparency for interested parties to better understand an airport's approach to pricing; and

D19.4 reduced complexity and compliance costs.

Stakeholder views

D20 Auckland Airport notes that the amendments to the asset valuation IM have allowed Auckland Airport to reflect its revaluation moratorium in its disclosed asset values eliminated the previous mismatch between priced other regulated asset values.

Our views

D21 The new requirement to use CPI or an un-indexed approach to asset revaluations has improved clarity about the expectations and transparency of information provided under information disclosure regulation.

D22 The recent amendments appear to have provided greater flexibility for Auckland Airport to disclose its asset values in a manner more consistent with its approach to setting prices.

Assets held for future use

D23 Assets held for future use had the following changes to the Airports ID Determination:

D23.1 inclusion of the value of assets held for future use and revenue from, or associated with, assets held for future use on a forecast basis in the ID Determination (so that airports can offset any revenue from, or associated

with, assets held for future use against the value of those assets held for future use); and

D23.2 amending the definition of "net revenue" to make it clearer that (as intended) revenues derived from, or associated with, assets held for future use are captured by that definition.

D24 The objectives of these changes were to provide:

D24.1 greater accuracy in the disclosures to better reflect an airport's pricing intent; and

D24.2 greater clarity about the requirements in the Airport IM and ID Determinations.

Stakeholder views

D25 Auckland Airport states that these amendments provide consumers with confidence that Auckland Airport's intention with respect to the RLC is that any dollar collected will serve to reduce long-term landing charges in an NPV neutral manner.

D26 Auckland Airport also notes that it was able to provide transparency about its RLC using the new forecast assets held for future use schedule in the ID Determination.

D27 Air New Zealand states that information disclosure provides greater transparency regarding Auckland Airport's proposed approach to the RLC.

D28 BARNZ submits that these amendments assist with understanding how the revenue stream associated with the RLC will be treated. It also notes however, that it seems that Auckland Airport may interpret the Commission's decision to include this disclosure requirement in Schedule 18 as an endorsement of the concept of the RLC, and in that sense, the disclosure is somewhat unhelpful.

Our view

D29 We consider that the amendments have provided for improved transparency with respect to Auckland Airport's decision to adopt a RLC.

The returns on priced services and other regulated services

D30 The following changes to the Airports ID Determination have been introduced with respect to priced assets:

D30.1 addition of a new schedule to the Airports ID Determination reflecting airports' targeted profitability based on the pricing asset base only; and

D30.2 requiring airports to explain any differences in profitability based on the pricing asset base and the profitability based on the total RAB.

D31 The objective of these changes was to provide greater transparency for interested parties to better understand an airport's approach to pricing.

Stakeholder views

D32 Auckland Airport submitted that it anticipated that those interested parties that had requested the additional level of breakdown of forecast information between pricing and total RAB would value the additional information provided by the new information disclosure requirements.[569]

Our views

D33 The amendments have made it easier for us to reconcile the outcomes of Auckland Airport's price setting event decisions (including its forecast modelling) with the disclosure of expected returns for its total RAB.

D34 The amendments appear to provide greater clarity about the different targeted returns for priced and other regulated assets, and the reasons for the expected returns on priced services. The reasons for the expected return on other regulated services are not best understood through the airport's price setting disclosure.

D35 As noted in **Chapter 2**, prices set in longer-term contracts for other regulated services are affected by a range of factors, including market conditions (eg, interest rate expectations), rent reviews and break clauses. These factors, and the volume of different contracts at any one time, make it difficult to determine whether returns on these contracts – over a given five-year pricing period – are appropriate.

D36 In light of this, we consider that an airport's returns on individual contracts for other regulated services are likely to be better assessed over a longer period of time and primarily on an ex-post basis, separately from priced services. A review of the returns associated with other regulated assets could potentially be included as part of ex-post review of airport performance, which we expect to undertake after Wellington Airport has completed its first five-year pricing period in 2019.

Forecast over and under-recoveries

D37 The following requirements were introduced to the Airports ID Determination with respect to forecast over and under-recoveries:

D37.1 including in the carry forward mechanism adjustments to the forecast closing investment value, any forecast over and under-recoveries that are intended by airports to be offset in future pricing events;

D37.2 requiring airports to summarise the views of substantial customers, as expressed during price setting consultation, regarding those forecast over and under-recoveries included in the carry forward mechanism; and

D37.3 when an airport has included forecast over and under-recoveries in the carry forward mechanism to adjust the forecast closing investment value, requiring the airport to provide information on:

[569] Auckland Airport "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (30 November 2017), page 9.

D37.3.1 why the resulting forecast closing investment value is a good indicator of the remaining capital to be recovered at the end of the current pricing period;

D37.3.2 the purpose and appropriateness of including these amounts in the carry forward mechanism;

D37.3.3 the intended duration until these forecast over and under-recoveries have been fully offset; and

D37.3.4 why using the carry forward mechanism to adjust the forecast closing investment value seems more appropriate in reflecting the airport's pricing intent than an alternative approach to accounting for these forecast over and under-recoveries already provided for under the IM and ID Determinations.

D38 The objective of these changes was to provide greater transparency for interested parties to better understand an airport's approach to pricing, and greater clarity about the requirements in the Airport IM and ID Determinations.

Stakeholder views

D39 Air New Zealand submitted that little incentive exists for airports to share risk because by participating in a risk sharing mechanism, airports effectively agree to lower their asset beta, and therefore their rate of return. Air New Zealand also notes that to the extent that any risk sharing was entered into, that risk would be reallocated every year, and that under the current settings, it is unlikely that airports will adopt any mechanism to share risk as available in the IMs.[570]

Our views

D40 Auckland Airport has made two carry forward adjustments consistent with IM and ID Determinations. These included the revaluation moratorium adjustment and the Pier B adjustment.

D41 The revaluation moratorium adjustment:

D41.1 does not allocate risk but appears to be an appropriate use of the mechanism to account for ongoing differences between the disclosed asset values and those used for setting prices; and

D41.2 allows the opening and closing investment values to better reflect present value of the expected remaining cash flows from the assets.

D42 We note that the Pier B adjustment is an example of a risk sharing arrangement that the ID changes (the introduction of a carry forward mechanism) sought to provide greater transparency about. The Pier B adjustment came into effect in PSE1, prior to

[570] Air New Zealand "Response to the Process and Issues Paper: Auckland and Christchurch Airports' third price setting events (July 2017-June 2022)" (28 November 2017), paragraph 28.

these ID changes, so at the time it was less clear how the Pier B adjustment impacted future price setting periods.

D43 Auckland Airport has not proposed any forward-looking risk allocation adjustment.

D44 In response to Air New Zealand's submission we note that while there has been no proposed forward-looking risk allocation adjustment in PSE3:

D44.1 we have seen greater discussion between the airport and airlines in consultations about these types of mechanisms, which suggests such a mechanism may be more likely to be used in future;

D44.2 achieving an appropriate allocation of risk between the parties cannot always be realised through applying a simple wash-up, because there are different types of risk associated with the forecasting and delivery of Auckland Airport's capital expenditure, and this has implications around which party is best placed to manage the risks; and

D44.3 we note that the wash-up proposed by some airlines may have reduced Auckland Airport's incentives to deliver its capital expenditure projects more efficiently.

Timing of cash flows

D45 The following requirements have been introduced to the Airports ID Determination with respect to the timing of cash flows:

D45.1 specifying, in the annual ex-post disclosures, 182 days before year end timing assumptions for all expenditures and 148 days before year end for all revenues;

D45.2 specifying, in the price setting event disclosures, 182 days before year end timing assumptions for all expenditures and 148 days before year end for all revenues; but

D45.3 providing, in the price setting event disclosures, the flexibility for airports to deviate from the default cash flow timing assumption if airports provide evidence that the actual cash flow timing for specific cash flow items is different from the default cash flow timing assumption.

D46 The objective of these changes was to provide transparency for interested parties to better understand an airport's approach to pricing.

Our views

D47 Auckland Airport has disclosed on the basis of mid-period cash flows and has not suggested alternative cash flow timing assumptions. It appears our amended approach to cash flow is generally appropriate for Auckland Airport.

D48 The changes have enabled greater clarity and consistency on cash flow timing assumptions compared to our review on the airport's PSE2 disclosure. We no longer have to test sensitivities on the impact of cash flow timing on expected airport profitability.