

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

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

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Executive Summary

- X1 Auckland International Airport Limited (Auckland Airport) is one of three international airports subject to information disclosure regulation under Part 4 of the Commerce Act 1986 (Act).
- X2 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).
- X3 We have reviewed Auckland Airport's pricing decisions and expected performance for the PSE3 period, with a focus on its expected profitability, investment efficiency and pricing efficiency. This draft report contains our analysis and draft conclusions and is intended to promote greater understanding of Auckland Airport's performance.
- X4 We are publishing this draft report under section 53B(2)(b) of the Act, which requires us to publish a summary and analysis of information disclosed by Auckland Airport about its price setting event.
- X5 We have considered whether Auckland Airport's pricing decisions and expected performance are likely to be in the long-term interest of consumers (consistent with Part 4 of the Act), taking account of submissions received to date on this review.¹

Draft Conclusions

Auckland Airport has not sufficiently justified its target returns over PSE3

- X6 Auckland Airport has not sufficiently justified the returns it is targeting on its regulated asset base (RAB). Given this, we are not yet confident that Auckland Airport will be limited in its ability to extract excessive profits over the PSE3 period.
- X7 Auckland Airport's disclosed target return is 7.06%.² This reflects its expected return on its RAB over PSE3 and beyond (ie, from 1 July 2017, over the remaining life of the assets). This expected return is above our mid-point weighted average cost of capital (WACC) estimate of 6.41%, which represents our benchmark when assessing the appropriateness of Auckland Airport's expected profitability.³
- X8 Customers can expect to pay an additional \$65m (or 4%) in airport charges over the five-year PSE3 period (in present value terms) compared to what they would pay if Auckland Airport was targeting our mid-point WACC estimate. Put another way,

¹ We received submissions on our *Process and Issues paper* published on 20 October 2017. These 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/>.

² All WACC values and return estimates in this draft report are in post-tax nominal terms (unless specifically noted otherwise).

³ Our mid-point WACC estimate can be found at: 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).

airport customers can expect to be charged an additional 61 cents per flight over the PSE3 period.⁴ After accounting for tax, this means that Auckland Airport is expected to earn an additional \$47m in profits over the PSE3 period.

- X9 We accept that there may be legitimate reasons for an airport to target returns that differ to our mid-point WACC estimate and we require airports to provide evidence to explain such differences.⁵ Overall, we are not satisfied that the evidence provided by Auckland Airport is sufficient to demonstrate that its target return is in the long-term interest of consumers.
- X10 Nonetheless, some of this additional \$47m profit may not represent excessive profits. We summarise the reasons for this below, and outline additional evidence Auckland Airport could provide to help support its target return.

Auckland Airport's expected returns on its regulated asset base comprise of two parts

- X11 Auckland Airport's target return of 7.06% is comprised of the following:
 - X11.1 Auckland Airport's target return of 6.99% (65th percentile of our WACC range)⁶ on its *aeronautical pricing services*, which include airfield landing facilities and services and airfield parking facilities and services, and passenger terminal services; and
 - X11.2 Auckland Airport's expected return on its *other regulated services* (predominantly aircraft and freight related services), which we have estimated as 7.9%.

- X12 We do not have any significant concerns with Auckland Airport's forecasts underpinning its expected revenues and returns. Accordingly, we have used Auckland Airport's forecasts as a basis for assessing its expected profitability. This includes using its forecast asset values, demand, operating expenditure, capital expenditure, and contingent runway land charge (RLC).

Auckland Airport has provided two main reasons for targeting a return on its aeronautical pricing services above our mid-point WACC estimate

- X13 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). This is because Auckland Airport expects its operating leverage (ie, its proportion of fixed costs to total costs) to increase over the PSE3 period, due to its large capital expenditure programme.

⁴ This estimate compares the difference between the revenues expected to be generated by Auckland Airport over PSE3 and the revenues required to recover our mid-point cost of capital estimate of 6.41% (using mid-year cash flows). We have estimated the total per passenger impact over the 5 year period using total passenger volumes (this includes domestic, international, transit and transfer passengers).

⁵ *Airport Services Information Disclosure Determination 2010* NZCC 29, Clause 2.5(1)(i).

⁶ Under the IM Determination, we determine a mid-point WACC estimate for airports, together with our view of the standard error of that estimate. The standard error can be used to estimate the probability distribution of our WACC estimate. An airport's target return is able to be expressed as an equivalent 'percentile' of our WACC distribution.

- X14 Auckland Airport has used its own forecast cost of debt for PSE3 of 4.52%, instead of our benchmark of 4.41%.
- X15 The airport's use of a higher cost of equity owing to its expectation of greater exposure to systematic risk is the more material of these two factors. 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 a higher estimate of systematic risk (ie, a higher asset beta), while 2 basis points are due to the higher cost of debt.

Auckland Airport has not sufficiently justified its target return on its aeronautical pricing services

- X16 In our view, Auckland Airport's target return on its aeronautical pricing services of 6.99% has not been sufficiently justified. We consider that:
 - X16.1 Auckland Airport has not demonstrated that its expected operating leverage will be sufficiently above that of other airports (in our comparator sample used to generate asset beta) to justify its higher return;
 - X16.2 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; and
 - X16.3 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 – may not be fully justified.

Auckland Airport has not justified its expected return on its other regulated services

- X17 Auckland Airport has not provided sufficient information to justify the returns it expects to receive on its other regulated services, which we have estimated as 7.9%. It has noted that these returns may differ to its target return on its aeronautical pricing services due to differences in the way prices are set. In particular, prices for other regulated services are based on individually negotiated agreements. This differs to prices for aeronautical pricing services, which are standardised charges based on the targeting of a particular return over the PSE3 period.

Not all of the additional \$47m the Airport is targeting is necessarily excessive profits

- X18 While we consider that Auckland Airport has not provided sufficient evidence to justify its disclosed target return of 7.06%, we do not necessarily consider that all of the additional \$47m the airport is targeting above our mid-point WACC estimate is excessive profits. The reasons are as follows.
- X19 Conceptually, we agree that Auckland Airport's significant capital expenditure programme is likely to increase its operating leverage, and that this may increase its exposure to systematic risk. This could justify an uplift to our estimated cost of equity and in turn, justify a target return above our mid-point WACC of 6.41%.

However, based on evidence received to date, we are not convinced that Auckland Airport's operating leverage over the PSE3 period will be sufficiently above that of other airports (in our comparator sample) to justify its higher target return.

- X20 Auckland Airport provided an explanation for why its expected return on its other regulated services was higher than its target return on its aeronautical pricing services. However, it has not sufficiently explained why this difference, or the level of this difference, is appropriate.
- X21 We would consider additional evidence in submissions as to whether the returns Auckland Airport is targeting on its total RAB (7.06%) above our mid-point WACC estimate of 6.41% are justified.

Auckland Airport can be expected to earn returns above our benchmark from its second runway assets

- X22 Auckland Airport is proposing to build a second runway in 2028 to accommodate future growth. Auckland Airport currently owns assets it is holding for the future development of this runway, including land. The airport is able to recognise the cost of holding these 'assets held for future use' at its target return, which is higher than our mid-point WACC estimate.
- X23 Upon commissioning of the second runway, these assets held for future use will be included in the airport's RAB, capitalised using the airport's own target return. 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 of potential returns is separate to the additional \$47m the airport is expected to earn above our benchmark.

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

- X24 We expect Auckland Airport to benefit from some of this additional \$8m over the PSE3 period, prior to the commissioning of its second runway. Specifically, the airport will begin to realise this additional revenue upon introducing its RLC. This is because the RLC is intended to recover the cost of holding land for the second runway.⁷
- X25 We note that this expectation of \$8m in 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.
- X26 We agree with Auckland Airport's intention to offset any forecast revenue from the RLC against the value of the land being held for the runway. In the event that the airport does not carry out this intention, we have the ability to comment on the airport's behaviour in future. This could include considering the impact of the airport

⁷ 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.

abandoning the second runway project after introducing the RLC, a risk that is in our view, small.

- X27 The RLC is proposed to be a flat-rate charge,⁸ and is therefore not structured in a way intended to send price signals that encourage more efficient use of the existing runway. We do not consider that to be necessarily inconsistent with efficient pricing. Airlines have indicated they would be relatively unresponsive to peak demand charging.
- X28 Nonetheless, decreasing the charge on non-peak users relative to peak users could improve allocative efficiency, relative to the flat-rate charge, by minimising the impact on demand of these higher charges. Auckland Airport should have given relevant consideration to this. Furthermore, it is not necessarily current peak users who will be the new beneficiaries of the second runway.

Strong passenger growth is enabling economies of scale in some areas of expenditure, while placing pressure on other areas

- X29 Auckland Airport has experienced strong passenger growth in recent years beyond forecast, including exceptional passenger growth in 2016 and 2017 of 8.6% and 11.3% respectively. Passenger numbers are forecast to increase year-on-year over the PSE3 period, creating further pressure on expenditure and infrastructure.
- X30 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 relative to historic levels.

Auckland Airport is investing heavily in new infrastructure in response to growth

- X31 Auckland Airport is responding to this growth through greater operating expenditure and large capital investment—in addition to the planned second runway, the airport is forecasting to invest \$1.8b in aeronautical infrastructure over the PSE3 period, which is significantly higher than historical investment.⁹
- X32 Based on stakeholder feedback, we consider that there are no significant concerns that Auckland Airport will not invest appropriately over the PSE3 period. 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. As these capital expenditure plans are progressed, the governance and consultation framework in place appears to provide airlines with reasonable opportunity to monitor Auckland Airport's performance in carrying out its plans and to assess proposed changes to these plans.

⁸ This flat-rate charge is per passenger per flight.

⁹ 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.

- X33 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.
- X34 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.
- X35 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.
- X36 Furthermore, 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.

Auckland Airport has continued to seek improvements to the efficiency of its prices

- X37 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.
- X38 However, we also consider that Auckland Airport should have given greater consideration to the benefits of lower charges at off-peak times (in conjunction with higher charges at peak times). This would help us and others assess the overall efficiency of its pricing.

Next steps

- X39 We invite you to provide your views on our draft conclusions and supporting analysis in this draft report by 25 May 2018. Cross submissions are due by 8 June 2018.
- X40 We are also reviewing Christchurch Airport's recent price setting event. In June 2018, we intend to publish and invite feedback on our draft conclusions about Christchurch Airport's pricing decisions and expected performance for the period 1 July 2017 to 30 June 2022.
- X41 After considering your views on both draft reports, we will be publishing our final reports on Auckland and Christchurch Airport's PSE3 pricing decisions and expected performance in September 2018.

Chapter 1 Introduction

Purpose of this draft report

1. This draft report contains our draft conclusions about Auckland International Airport Limited's (Auckland Airport) pricing decisions and expected performance for the period 1 July 2017 to 30 June 2022.
2. Auckland Airport is subject to information disclosure regulation under Part 4 of the Commerce Act 1986 (Act). We are publishing this draft 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.¹⁰
3. The conclusions and analysis in this draft report take into account the submissions we received on this review, in response to our *Process and Issues paper* published on 20 October 2017.¹¹

Structure of this chapter

4. This chapter discusses:
 - 4.1 the context for this draft report;
 - 4.2 the focus of our review, including consideration of stakeholder views;
 - 4.3 our approach to assessing expected performance in this review;
 - 4.4 the information we have used to assess expected performance in this review;
 - 4.5 the structure of the remaining document; and
 - 4.6 the next steps, including how you can provide your views on this draft report.

Context for this draft report

Auckland Airport has reset its prices

5. In June 2017, Auckland Airport reset its prices for the period 1 July 2017 to 30 June 2022 after consulting with airlines. This resulted in revenue expectations for the provision of specified airport services for up to (but no more than) five years.
6. Under the Airport Authorities Act 1966 (AAA), airports can set prices as they see fit,¹² but must consult with airlines prior to fixing or altering charges and within at least

¹⁰ Auckland Airport is required to publicly disclose information about its price setting event in accordance with the Airport Services Information Disclosure Determination 2010.

¹¹ The *Process and Issues paper* and all submissions received on it 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/>.

¹² Airport Authorities Act 1966, section 4A.

five years after fixing or altering charges.¹³ This means that airports reset prices at least every five years. Airports have been setting prices under the AAA before they were subject to information disclosure regulation under the Act in 2011.

7. Auckland Airport refer to the prices it has set for the pricing period 1 July 2017 to 30 June 2022 as its third price setting event (PSE3). In this document, we refer to the pricing period 1 July 2017 to 30 June 2022 as the ‘PSE3 period’. 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

8. In August 2017, Auckland Airport publicly disclosed information about its pricing decisions over the PSE3 period.
9. After a price setting event, each airport subject to information disclosure regulation, namely Auckland, Wellington and Christchurch International Airports,¹⁴ must publicly disclose information relating to its forecast total revenue requirement for its regulated services.¹⁵

¹³ Specifically, section 4B of the Airport Authorities Act 1966 requires airports to consult with “substantial customers”, the meaning of which is set out in section 2A of the AAA.

¹⁴ See section 56A of the Act.

¹⁵ 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.

10. Table 1.1 below outlines the regulated services which are the subject of Auckland Airport's PSE3 disclosure, and its other services which are not regulated.

Table 1.1 Regulated and non-regulated airport services

Regulated airport services ¹⁶	Non-regulated airport services (outside the scope of this draft report)
<p>Aeronautical pricing services,¹⁷ which the Airport has set standardised prices for, include:</p> <ul style="list-style-type: none"> • airfield landing facilities and services • airfield parking facilities and services • specified passenger terminal activities. <p>Other regulated services,¹⁸ which the airport has negotiated prices with individual customers, include:</p> <ul style="list-style-type: none"> • aircraft activities • freight activities • other specified passenger terminal activities, including identified leases, VIP airside lounges, and collection facilities for duty free. 	<p>Examples include:</p> <ul style="list-style-type: none"> • the 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, and car parks • car rental tenancies and property leases.

11. Although not the subject of this draft 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.¹⁹

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

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

14. 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-

¹⁶ Regulated airport services are defined as 'specified airport services' in subpart 11 of Part 4 of the Act. Each of the 'specified airport services' is defined in detail in section 2 of the AAA.

¹⁷ 'Aeronautical pricing services' are referred to as the 'pricing asset base' in our Information Disclosure Determination 2010.

¹⁸ 'Other regulated services' are also known as non-pricing services.

¹⁹ *Airport Services Information Disclosure Determination 2010* NZCC 29, clause 2.3 and 2.4.

12 pricing period (PSE1).²⁰ This was part of a wider review on the effectiveness of information disclosure regulation under section 56G of the Act.²¹

Focus of our review

- 15. 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.
 - 15.1 Expected profitability: is Auckland Airport limited in its ability to extract excessive profits?
 - 15.2 Investment efficiency: is Auckland Airport investing in assets appropriately, efficiently and at a quality standard that reflects consumer demands?
 - 15.3 Pricing efficiency: are the prices set by Auckland Airport likely to promote efficiency?
- 16. 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.
- 17. 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*
- (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*

²⁰ 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.

²¹ 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/>.

(d) are limited in their ability to extract excessive profits.

18. Our focus on expected profitability, investment efficiency, and pricing efficiency do 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)).
19. This focus reflects the nature of the information provided in the PSE3 disclosure, which is the subject of this review. As 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

20. In response to our *Process and Issues paper*, stakeholders commented on the scope of our review of Auckland Airport's pricing decisions and expected performance over the PSE3 period.
21. The New Zealand Airports Association (NZ Airports Association) considered that our focus for this review "appropriately reflects the nature and content of the price setting disclosures"²² 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 disclosure.²³
22. On the other hand, Air New Zealand stated that excluding innovation, quality, and efficiency from this review ignores a number of the limbs of the purpose of Part 4, and would set a precedent which would permanently weaken the regulatory regime.²⁴ The Board of Airline Representatives New Zealand Incorporated (BARNZ) argued that innovation, quality and efficiency are areas of performance that most directly affect consumers.²⁵ BARNZ considered that it is difficult to conclude that a pricing decision is in the long-term interests of consumers without considering all aspects of performance.²⁶

²² 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.

²³ 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.

²⁴ 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), paragraphs 4 and 10.

²⁵ 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.

²⁶ 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 24.

23. Related to this, Air New Zealand, BARNZ and Qantas argue that this review should cover airports' annual ex-post information disclosures.²⁷ 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".²⁸

Our response

24. 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. 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.
25. 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.
26. 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).²⁹ We consider it best to commence an ex-post analysis of airports' performance after this has occurred, rather than prior.³⁰

²⁷ 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.

²⁸ 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 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 5 year pricing period since information disclosure regulation began.

³⁰ 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.

27. We do not agree with Air New Zealand that our focus on particular aspects of performance for this review sets a precedent for subsequent reviews.³¹ The scope of future reviews will be based on the relevant circumstances and relevant information disclosed at the time.
28. 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.

Approach to assessing expected performance in this review

29. We have assessed whether Auckland Airport's expected profitability, investment efficiency, and pricing efficiency is consistent with the outcomes that are in the long-term benefit of consumers, as reflected in the purpose of Part 4 of the Act.
30. We outline the broad approach to this assessment below. There are differences in the specific approaches taken to assessing each performance area, and so we outline these in the relevant sections throughout this draft report.

Input methodologies provide a benchmark for assessing expected performance

31. 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.
32. IMs represent our best assessment of how certain building blocks – cost allocation, asset valuation, the treatment of taxation, and the cost of capital – should be specified to promote the setting of revenue targets consistent with the Part 4 purpose. These building blocks are inputs into the airport's profitability. Therefore, IMs are most relevant to our assessment of whether Auckland Airport is limited in its ability to extract excessive profits.
33. 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 but must disclose information consistent with the IMs for information disclosure purposes.

We consider reasons for departure from our input methodologies

34. 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.

³¹ 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.

35. 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 benchmark value, in light of the Part 4 purpose. Ultimately, we establish whether a departure from our benchmark value is promoting the long-term benefit of consumers.
36. In this review, we consider reasons for departure from our IMs in respect of Auckland Airport's cost of capital.

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

37. 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).
38. This is most relevant to our analysis of the airport's investment efficiency and pricing efficiency, where IMs are less prescriptive than they are in relation to profitability.
39. To assess this, we have been largely reliant on submissions received from interested parties about the airport's conduct throughout its consultation process and the level of agreement among stakeholders regarding the outcomes of that process.

We take into account relevant context and conclusions in our section 56G reviews

40. Our approach to assessing Auckland Airport's expected profitability, investment efficiency, and pricing efficiency is consistent with our review of Auckland Airport's PSE2, unless there is a good reason for departure (for example, to reflect changes to our IMs following our review in 2016). 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.
41. Our review of Auckland Airport's PSE2 was undertaken as part of a wider review on the effectiveness of information disclosure regulation.³² This one-off review was required under section 56G of the Act and differs to this draft 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.
42. 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

³² 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/>.

efficiency, efficient investment and the sharing of benefits from efficiency gains) as there was an insufficient time series of data available.³³

Information we have used to assess expected performance in this review

43. We have prepared this draft report after considering all submissions and cross submissions received to date on our *Process and Issues paper*, which initiated this review.
44. We have relied on the following information as part of our review:
 - 44.1 information disclosed by Auckland Airport under Part 4 of the Act, including its PSE3 disclosure and historical information to the extent relevant;³⁴
 - 44.2 material provided to date by stakeholders as part of the consultation process for this review; and³⁵
 - 44.3 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

45. In response to our *Process and Issues paper*, Auckland Airport and the New Zealand Airports Association asked that this review focus on the information available at the time of the price setting event.
 - 45.1 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.³⁶
 - 45.2 Similarly, the New Zealand Airports Association stated that the review should not provide a forum for consulting participants to raise new concerns or put forward new evidence or arguments that were not put to the airports during the consultation process.³⁷
46. 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

³³ 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.

³⁴ See <https://corporate.aucklandairport.co.nz/investors/regulation>.

³⁵ See <http://www.comcom.govt.nz/regulated-industries/airports/airports-information-disclosure-summary-and-analysis/price-setting-event-3-pse3-for-auckland-and-christchurch/>.

³⁶ 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.

³⁷ 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.

our ability to review the decisions and create substantial procedural and practical difficulties.³⁸

47. 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.
48. 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.

Structure of this document

49. **Chapter 2** contains our analysis and draft conclusions on whether Auckland Airport will be limited in its ability to extract excessive profits. This chapter focusses on whether Auckland Airport has sufficiently justified its target returns, and summarises our views on the airport's runway land charge.
50. **Chapter 3** contains our analysis and draft conclusions on the extent to which Auckland Airport is investing in assets appropriately, efficiently and at a quality standard 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**).
51. **Chapter 4** contains our analysis and draft conclusions on the extent to which Auckland Airport has incentives to set prices that are likely to promote efficiency. This chapter focusses on the extent to which Auckland Airport's pricing methodology reflects efficient pricing principles (eg, prices should have regard to consumers' demand responsiveness). This includes consideration of the airport's proposed runway landing charge.
52. We have also included attachments to support our analysis.
 - 52.1 **Attachment A** contains our assessment of Auckland Airport's cost of capital. This is a key input to our analysis and draft conclusion in **Chapter 2**.
 - 52.2 **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 draft conclusions in **Chapter 2**. This attachment also considers the extent to which

³⁸ 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.

Auckland Airport has incentives to improve its operating efficiency and provide services at a quality that reflects consumer demands.

- 52.3 **Attachment C** describes our methodology for our assessment of Auckland Airport's expected profitability, discussed in **Chapter 2**.
- 52.4 **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.

Next steps

53. We invite you to provide your views on our draft conclusions and supporting analysis in this draft report by 25 May 2018. Cross submissions are due by 8 June 2018.
54. We are also reviewing Christchurch Airport's recent price setting event. In June 2018, we intend to publish and invite feedback on our draft conclusions about Christchurch Airport's pricing decisions and expected performance for the period 1 July 2017 to 30 June 2022.
55. After considering your views on both draft reports, we will be publishing our final reports on Auckland and Christchurch Airport's pricing decisions and expected performance (over the July 2017 – June 2022 period) in September 2018.

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

Purpose

- 56. This chapter contains our analysis and draft conclusions on whether Auckland Airport is limited in its ability to extract excessive profits (section 52A(1)(d) of the Act).
- 57. This chapter focusses on whether Auckland Airport's target returns, and associated profit, over the PSE3 period have been sufficiently justified such that it is likely to be in the long-term interest of consumers.
- 58. Our analysis and draft conclusions on forecasts underpinning Auckland Airport's expected returns and profitability are discussed in **Chapter 3** (capital expenditure forecasts) and **Attachment B** (asset values, demand forecasts, operating expenditure forecasts, and its RLC).

Draft Conclusions

Auckland Airport has not sufficiently justified its target returns over PSE3

- 59. In our view, Auckland Airport has not sufficiently justified the returns it is targeting on its regulated asset base (RAB) for PSE3 above our benchmark cost of capital for appropriate expected profitability. Given this, we are not yet confident that Auckland Airport will be limited in its ability to extract excessive profits over PSE3.
- 60. Auckland Airport's disclosed target return is 7.06%.³⁹ This is consistent with our assessment of Auckland Airport's expected returns on its total RAB for PSE3 and beyond (ie, from 1 July 2017 over the remaining life of the assets).⁴⁰ This expected return is greater than our mid-point weighted average cost of capital (WACC) estimate of 6.41%, which represents our benchmark when assessing the appropriateness of Auckland Airport's expected profitability.⁴¹
- 61. Auckland Airport's target revenue is \$1,559m over PSE3 in present value terms. This is \$65m more than the \$1,494m revenue required to support our benchmark cost of capital. This means that customers can expect to pay an additional \$65m (or 4%) in airport charges over PSE3 (in today's dollars) compared to what they would pay if Auckland Airport was targeting our mid-point WACC estimate. Put another way, airport customers can expect to be charged an additional 61 cents per flight over the

³⁹ All WACC values and return estimates in this draft report are in post-tax nominal terms (unless specifically noted otherwise).

⁴⁰ We have estimated Auckland Airport's expected returns to be 7.1%. All estimates of expected returns generated from our own analysis are provided to one decimal place.

⁴¹ This can be found at: 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).

five-year period.⁴² After accounting for tax, this means that Auckland Airport is expected to earn an additional \$47m in profits.

62. Nonetheless, some of this additional \$47m profit may not represent excessive profits. This chapter provides our reasons for this, and outlines additional evidence Auckland Airport could provide to help support its target return.

Auckland Airport's expected returns on its regulated asset base comprise of two parts

63. Auckland Airport's overall expected return of 7.06% is comprised of:

- 63.1 Auckland Airport's stated target return of 6.99% (65th percentile of our WACC range)⁴³ on its aeronautical pricing services which include airfield landing facilities and services and airfield parking facilities and services, and passenger terminal services; and
- 63.2 Auckland Airport's expected returns on its other regulated services (predominantly aircraft and freight related services), which we have estimated as 7.9%.⁴⁴

Auckland Airport has not sufficiently justified its target return on its aeronautical pricing services

64. In our view, Auckland Airport's target return of 6.99% on its aeronautical pricing services has not been sufficiently justified. We consider that:
 - 64.1 Auckland Airport has not demonstrated that its expected operating leverage (proportion of fixed costs to total costs) will be sufficiently above that of other airports (in our comparator sample used to generate asset beta) to justify its higher return;⁴⁵
 - 64.2 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; and
 - 64.3 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

⁴² These values are based on our estimate of the difference between the revenues expected to be generated by Auckland Airport over PSE3 and the revenues required to recover our mid-point cost of capital estimate of 6.41% (using mid-year cash flows). We have estimated the total per passenger impact over the 5 year period by using total passenger volumes (this includes domestic, international and transit and transfer passengers).

⁴³ Under the IMs, we determine a mid-point cost of capital estimate for airports, together with our view of the standard error of that estimate. The standard error can be used to estimate the probability distribution of our WACC estimate. An airport's target return is able to be expressed as an equivalent 'percentile' of our WACC distribution.

⁴⁴ This figure was not disclosed to us by Auckland Airport. We have estimated it based on Auckland Airport's disclosed overall expected return of 7.06% and its disclosed target return of 6.99%.

⁴⁵ Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraphs 460-463 and Attachment C.

point increase – between its draft and final pricing decision – may not be fully justified.

65. Our full analysis underpinning this draft conclusion is set out in **Attachment A**.

Auckland Airport has not justified its expected returns on its other regulated services

66. Auckland Airport has not provided information to justify the returns it expects to receive on its other regulated services, which we have estimated as 7.9%. Auckland Airport has noted that these returns may differ to its target returns on aeronautical pricing services due to differences in the way prices are set. However, it has not sufficiently explained why this difference, or the level of this difference, is appropriate.

Not all of the additional \$47m the Airport is targeting are necessarily excessive profits

67. While we consider that Auckland Airport has not provided sufficient evidence to justify its disclosed target return of 7.06%, we do not necessarily consider that all of the additional \$47m the airport is targeting above our mid-point WACC estimate is excessive profits. The reasons are as follows.
68. Conceptually, we agree that Auckland Airport's significant capital expenditure programme is likely to increase its operating leverage, and that this may increase its exposure to systematic risk. This could justify an uplift to our estimated cost of equity and in turn, justify a target return above our mid-point WACC of 6.41%. However, we are not convinced that Auckland Airport's operating leverage will be sufficiently above that of other airports (in our asset beta comparator sample) over the PSE3 period to justify its higher target return of 6.99%.
69. Furthermore, Auckland Airport has not explained why the difference between its expected return on its other regulated services (which we have estimated as 7.9%) and its aeronautical pricing services (6.99%) is appropriate, or why the level of this difference is appropriate.
70. We welcome additional evidence in submissions as to whether the returns Auckland Airport is targeting on its total RAB (7.06%) above our mid-point cost of capital estimate of 6.41% are justified.

Auckland Airport can be expected to earn returns above our benchmark on its second runway assets

71. Auckland Airport is proposing to build a second runway in 2028 to accommodate future growth. The airport currently owns assets that will be used in the future development of this runway, including land. Auckland Airport is able to recognise the cost of holding these 'assets held for future use' at its target return, which is higher than our mid-point WACC estimate.
72. Upon commissioning of the second runway, these assets held for future use will be included in the airport's RAB, capitalised using the airport's own target return. At the end of PSE3, we estimate the value of these assets to be about \$10m (or 3%) higher

than what 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 of potential returns is separate to the additional \$47m the airport is expected to earn on its RAB over the PSE3 period above our mid-point WACC estimate.

- 73. We expect Auckland Airport to begin realising some of this additional revenue upon introducing its runway land charge (RLC), which is intended to recover the forecast holding costs on land being held for the runway.
- 74. We note that this expectation of additional revenue above our mid-point WACC arises irrespective of the proposed RLC. The role of the RLC is to bring this additional revenue forward in time. 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 discussed in **Attachment B**.

Auckland Airport's forecasts underpinning its expected returns do not raise significant concerns

- 75. 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 RLC.
- 76. 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

- 77. In considering whether we expect Auckland Airport to earn excessive profits, we have not considered Auckland Airport's historic performance over PSE1 or PSE2. Instead, we have used our mid-point cost of capital provided for in our IMs as a benchmark against which to measure expected performance:
 - 77.1 We have 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.
 - 77.2 We have calculated the return we expect Auckland Airport will earn based on the prices it set for the PSE3 period, its forecast passenger volumes and aircraft movements and its forecast costs.

- 77.3 We have then compared this 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%.⁴⁶
78. 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.⁴⁷ However, our draft conclusion is that Auckland Airport has not sufficiently demonstrated that its overall expected return of 7.06% is in the long-term interest of consumers. Our reasoning for this is discussed in this chapter; further detail can be found in **Attachment A**.
79. 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. Overall, we do not have any significant concerns with these forecasts. Accordingly, we have used the airport's forecasts as a basis for assessing Auckland Airport's expected profitability.
80. Our analysis on these values and forecasts is discussed in **Chapter 3** (forecast capital expenditure) and **Attachment B** (forecast asset values, demand, operating expenditure, and the RLC).
81. This means our assessment of whether Auckland Airport's expected returns over the PSE3 period have been sufficiently justified focusses on Auckland Airport's expected return relative to our mid-point cost of capital.

Will Auckland Airport's prices provide a justifiable return over time?

82. Our own analysis of Auckland Airport's expected performance indicates that its expected returns for the PSE3 period and beyond (ie, from 1 July 2017 over the remaining life of the assets) are likely to be 7.1%. This estimate is:
- 82.1 greater than our mid-point WACC of 6.41%, published in our WACC determination; and
 - 82.2 consistent with Auckland Airport's stated target return on its total RAB of 7.06%.⁴⁸
83. These returns are compared in Table 2.1 below.

⁴⁶ This can be found at: 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).

⁴⁷ *Airport Services Information Disclosure Determination 2010* NZCC 29, clause 2.5(1)(i).

⁴⁸ All estimates of expected returns generated from our own analysis are provided to 1 decimal place.

Table 2.1 Summary of key returns

Key returns	Target return	WACC percentile
Our benchmark mid-point cost of capital	6.41%	50 th
Auckland Airport's target return on its total RAB	7.06%	67 th
This comprises of:		
Auckland Airport's target return on its aeronautical pricing assets	6.99%	65 th
Our assessment of Auckland Airport's expected return on its other regulated assets ⁴⁹	7.9%	85 th
Our assessment of Auckland Airport's expected return on its total RAB	7.1% ⁵⁰	67 th

Value and impact of returns expected to be earned by Auckland Airport

84. Overall, we do not consider that Auckland Airport has provided sufficient evidence to justify its target return on its total RAB of 7.06%. This is discussed in this Chapter and **Attachment A**.
85. We have quantified the monetary value of the additional returns we expect the airport to receive above our 6.41% mid-point WACC estimate. This includes the impact on airport customers (which is represented by revenues the airport expects to receive above those required to support expected returns of 6.41%).
86. We estimate that Auckland Airport's target revenue is \$1,559m over PSE3 in present value terms. This is \$65m more than the \$1,494m of revenue required to support our mid-point WACC estimate.
87. This means that customers can expect to pay an additional \$65m (or 4%) in airport charges over PSE3 (in present value terms) compared to what they would pay if Auckland Airport was targeting our mid-point WACC estimate. Put another way, airport customers can expect to be charged an additional 61 cents per flight over the five-year period.⁵¹ After accounting for tax, this means that Auckland Airport is expected to earn an additional \$47m in profits.
88. Nonetheless, some of this additional \$47m profit may not represent excessive profits. While we consider that Auckland Airport has not provided sufficient evidence to justify its target return of 7.06%, we do not necessarily consider that all of the

⁴⁹ 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 its aeronautical pricing assets.

⁵⁰ All estimates of expected returns generated from our own analysis are provided to 1 decimal place.

⁵¹ These values are based on our estimate of the difference between the revenues expected to be generated by Auckland Airport over PSE3 and the revenues required to recover our mid-point cost of capital estimate of 6.41% (using mid-year cash flows). We have estimated the total per passenger impact over the 5 year period by using total passenger volumes (this includes domestic, international and transit and transfer passengers).

additional \$47m the airport is targeting above our mid-point WACC estimate is excessive profits. We provide our reasons for this below, as well as outlining additional evidence Auckland Airport could provide to help support its target return.

Profitability assessment methodology

89. We have estimated Auckland Airport's expected return for PSE3 by calculating an IRR forecast and comparing this to the airport's disclosed target return.
90. We consider the airport's forecast cash flows are suitable for the cash flows used in our IRR calculation. Our analysis on Auckland Airport's values and forecasts driving these forecast cash flows is contained in **Chapter 3** (forecast capital expenditure) and **Attachment B** (forecast asset values, demand, operating expenditure, and RLC).
91. **Attachment C** outlines our methodology for this profitability assessment in more detail.

Analysis on Auckland Airport's overall expected return of 7.06%

Our approach

92. The present value of any additional returns likely to be earned by Auckland Airport can be estimated by comparing Auckland Airport's target return to our mid-point WACC estimate.
93. This approach follows our 2016 input methodology review, where we changed our approach to disclosing WACC, due to two main problems with the previous framework:⁵²
 - 93.1 the upper limit of our WACC range had become the de facto benchmark when assessing airport profitability; and
 - 93.2 there was limited and weak rationale for using the 75th percentile as the upper limit of the WACC percentile range.
94. 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 provide evidence to explain the difference between its target return and our mid-point WACC estimate.
95. We noted that this approach:⁵³
 - 95.1 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

⁵² Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph X4.

⁵³ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), page 3.

- 95.2 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.
96. In establishing our estimate of the airport's expected return, we carefully reviewed the reasons why the airport has used different parameters or approaches from those that are set out in the information disclosure requirements. With the exception of Auckland Airport's higher target return, Auckland Airport's parameters were consistent with our IMs.

Auckland Airport's target return on its aeronautical pricing services

97. Auckland Airport's target return on its aeronautical pricing 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.
98. Auckland Airport has provided two main reasons for targeting a return on its aeronautical pricing services above our mid-point WACC estimate.
- 98.1 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). This is because Auckland Airport expects its operating leverage to increase over the PSE3 period, due to its large capital expenditure programme. Operating leverage measures the proportion of fixed costs to total costs.
- 98.2 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).
99. 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, but we have assessed it to be 0.08 above our benchmark of 0.60.
100. Of the 0.58% difference between Auckland Airport's target return (6.99%) and our mid-point WACC estimate (6.41%), 56 basis points are due to increased systematic risk (implicitly, a higher asset beta) while 2 basis points are due to its higher cost of debt.

Auckland Airport has not sufficiently justified its target return on its aeronautical pricing services

101. We consider that the specific magnitude of adjustment to each WACC parameter is an important factor when considering whether the airport's approach is justified. 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 mid-point WACC estimate.

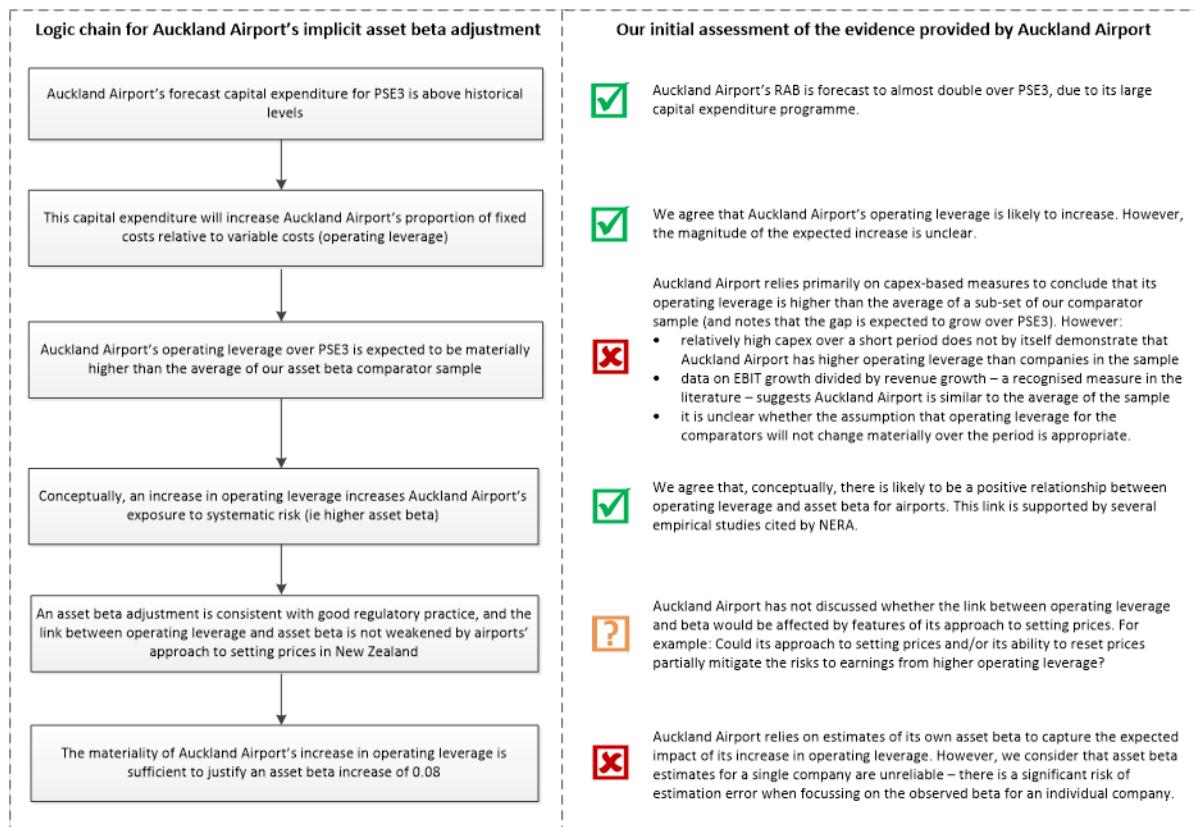
102. Overall, we consider that Auckland Airport's target return of 6.99% has not been sufficiently justified for the following reasons. Further discussion on this can be found in **Attachment A**.

- 102.1 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.
- 102.2 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.

Our initial assessment of Auckland Airport's implicit asset beta adjustment

- 103. 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:
 - 103.1 its operating leverage is (or is expected to be) significantly higher than the companies in our comparator sample; and
 - 103.2 the difference is of a magnitude that can reasonably be expected to meaningfully impact asset beta.
- 104. Conceptually, we agree that Auckland Airport's forecast increase in capital expenditure is likely to increase its operating leverage, and that this 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%.
- 105. However, based on the evidence before us, we are not convinced that Auckland Airport's:
 - 105.1 current operating leverage is above the average operating leverage of the 26 companies in our asset beta comparator sample; or
 - 105.2 forecast operating leverage over the PSE3 period will be materially above the average operating leverage for the companies in our comparator sample, to justify an (implicit) increase in asset beta of 0.08.
- 106. Therefore, we consider that Auckland Airport's implicit adjustment to asset beta has not been sufficiently justified at this stage. Our initial assessment of Auckland Airport's implicit asset beta adjustment is summarised in Table 2.2 below.

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



We would consider additional evidence regarding the airport's target return

107. We would consider additional evidence as to whether Auckland Airport's target return on its aeronautical services of 6.99% is justified. In particular, we welcome additional evidence on whether the airport's implicit adjustment to our asset beta estimate of 0.60 is justified. This could include the airport demonstrating that its operating leverage will be materially higher than the average of other airports' operating leverage (in our asset beta comparator sample). We consider the following evidence would help support this.

- 107.1 Empirical evidence showing whether Auckland Airport's operating leverage over the PSE3 period is expected to be materially higher than the average of the 26 airports in our asset beta comparator sample. We expect this would require comparing a more robust estimate of Auckland Airport's forecast operating leverage over the PSE3 period against comparable estimates of the degree of operating leverage for other companies in the comparator sample.
- 107.2 Views from independent parties, such as rating agencies or research brokers, indicating whether a forecast increase in operating leverage for other companies in analogous situations was expected to increase the regulated or corporate WACC.

- 107.3 Evidence relating to whether other regulatory agencies have made asset beta adjustments due to operating leverage of a similar magnitude to that made by Auckland Airport.

Auckland Airport's expected return on its other regulated services

108. Auckland Airport's disclosed expected return is 7.06% on all regulated assets (its total RAB). Within this, we estimate its target return on its other regulated services is about 7.9%. This is higher than the 6.99% it is targeting on its aeronautical pricing services.
109. In the *Process and Issues paper* we noted we are interested in understanding the rationale for the different target returns for assets within the RAB.⁵⁴ Ultimately, it is the total RAB (both aeronautical pricing assets and other regulated assets) that matters when considering whether the airport is limited in its ability to earn excessive profits.

Regulatory disclosure requirements

110. As part of the 2016 input methodology review, we introduced new requirements for airports to:
- 110.1 disclose targeted returns based on the aeronautical pricing assets, in addition to the requirement to disclose profitability on the total RAB; and
 - 110.2 explain any differences in profitability based on the aeronautical pricing asset base and the profitability based on the RAB.

Auckland Airport's explanation for differences in returns

111. Auckland Airport stated that it has not targeted a particular WACC estimate for other regulated services, which are predominantly aircraft and freight activities. It suggests that the difference in its target returns for aeronautical pricing services (6.99%) and its forecast revenue for other regulated services (equating to an expected return of 7.9%) arises due to differences in the way revenue is set for these services.
112. Specifically, the airport noted 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 aeronautical pricing services).⁵⁵ This compares to the airport's forecast revenue for aeronautical pricing assets, which is determined using a building blocks model at each five-yearly price setting period – where the target return is a key input.
113. Auckland Airport also noted that the same approach was used for other regulated services in PSE2, but in that case the difference in target returns ran the other way. That is, in PSE2 the effective return for other regulated assets was lower than for

⁵⁴ Commerce Commission "Have your say on the review of Auckland and Christchurch Airports' third price setting events (July 2017 – June 2022): Process and issues paper" (20 October 2017), paragraph 51.

⁵⁵ 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.

aeronautical pricing assets. We estimate that Auckland Airport's expected return on its other regulated assets over the PSE2 period was 5.0%. This compares to its target return on its aeronautical pricing assets of 8.5% over the PSE2 period.⁵⁶

114. We note that over this time (between PSE2 and PSE3) we changed how we assess the cost of capital. Specifically, we removed reference to the 75th percentile of our WACC estimate. We now require airports to provide evidence to explain its target returns above our mid-point WACC estimate.

Views from submissions

115. BARNZ noted that Auckland Airport's expected return for other regulated activities "seems particularly excessive."⁵⁷
116. Auckland Airport stated that "it is realistic to expect that the effective return for other regulated activities may be above the target return for aeronautical pricing activities in some periods, and below in other periods, given the different methodologies used to set prices for each set of activities."⁵⁸
117. Furthermore, Auckland Airport maintains that it has applied a consistent approach to setting rental rates for other regulated activities (ie, negotiations linked to market evidence), and suggests BARNZ had previously recognised the validity of this approach.⁵⁹
118. Submitters have not raised concerns about consumers' lack of bargaining power in respect of services associated with other regulated assets during the consultation process for this review.

Auckland Airport has not justified its expected returns on its other regulated services

119. Auckland Airport has not provided us with sufficient information to explain the returns it expects to receive on its other regulated assets that are above our mid-point WACC estimate (7.9% compared to 6.41%).
120. Auckland Airport has noted that these returns may differ to its target returns on aeronautical pricing services due to differences in the way prices are set. We accept that this may occur. However, in our view Auckland Airport has not explained why this difference in expected returns, or the level of this difference, is appropriate.

We would consider additional evidence regarding the airport's expected returns

121. We would consider additional evidence in submissions as to whether the returns Auckland Airport is targeting on its total RAB (7.06%) are justified. In particular, we

⁵⁶ 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 8.

⁵⁷ BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), table 2, row 5, page 9.

⁵⁸ 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 12-13.

⁵⁹ 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 12-13.

welcome additional evidence about whether the higher expected returns on other regulated services are appropriate, when compared to the airport's target return on its aeronautical pricing assets. This could include providing information on whether other regulated services face greater exposure to systematic risk than the airport's aeronautical pricing services or that returns for these services should be considered over a longer period.

Auckland Airport can be expected to earn returns above our benchmark from its second runway assets

122. Auckland Airport is intending to build a second runway to accommodate future growth. The second runway is currently forecast to be commissioned in 2028.
123. The airport currently owns assets that it is holding for the future development of this second runway, including land. These assets are:
 - 123.1 classified as 'assets held for future use' under the Airport ID Determination;⁶⁰ and
 - 123.2 valued by the formula:⁶¹

base value + holding costs – net revenue – tracking revaluations.
124. 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).⁶²
125. 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).⁶³ 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 this risk.
126. The IM Determination allows airports to use their own cost of capital estimate when calculating the holding costs of assets held for future use.⁶⁴ 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.

⁶⁰ Such land is also referred to as excluded assets, land held for future use and future development land.

⁶¹ *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.11.

⁶² *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.1 and definition of "excluded assets".

⁶³ 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.

⁶⁴ Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), paragraph C10.6.

127. This means Auckland Airport is able to:
- 127.1 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
 - 127.2 include these assets in its RAB once they are used in the development of the second runway, capitalised using its own target return.
128. 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 Auckland Airport has not sufficiently justified its target return of 7.06%.
129. 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 \$47m the airport is expected to earn on its RAB over the PSE3 period above our mid-point WACC estimate.
130. We expect Auckland Airport to benefit from some of this additional \$8m over PSE3 prior to the commissioning of its second runway. Specifically, the airport will begin to realise this additional revenue upon introducing its RLC. We discuss this below.

Auckland Airport is introducing a Runway Land Charge

131. Auckland Airport has decided to introduce a 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.⁶⁵
132. 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.⁶⁶
133. 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:⁶⁷
- 133.1 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

⁶⁵ 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.

⁶⁶ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

⁶⁷ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

133.2 resolved to proceed with construction of the second runway.

Our views on the Runway Land Charge and its relationship to its second runway assets

134. 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 this additional revenue upon introducing its RLC, given the RLC is intended to recover the forecast holding costs on land being held for the second runway.
135. We note that this expectation of \$8m in additional revenue (today's dollars) arises due to the airport targeting a return above our mid-point WACC and irrespective of the proposed RLC. The role of the RLC is to bring this additional revenue forward in time. No other aspects of the RLC – as proposed by Auckland Airport – raise due concern that the airport could earn excessive profits over the PSE3 period. 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.

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

Purpose

136. This chapter contains our analysis and draft conclusions on the extent to which Auckland Airport has incentives to invest appropriately, efficiently and at a quality standard that reflects consumer demands (sections 52A(1)(a) and (b) of the Act).⁶⁸
137. This chapter focusses on whether Auckland Airport's capital expenditure (capex) forecasts raise any significant concerns that these outcomes will not be achieved.
138. The timing and value of Auckland Airport's capex profile affects its expected profitability. Therefore, some of the analysis and draft conclusions in this chapter directly affect our draft assessment of whether Auckland Airport is limited in its ability to extract excessive profits (section 52A(1)(d) of the Act).

Draft Conclusions

139. In addition to its planned second runway, Auckland Airport is forecasting to invest \$1.8b in aeronautical infrastructure over the PSE3 period, which is significantly higher than historical investment.⁶⁹
140. 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 capex forecasts do not raise concerns that it would be expected to extract excessive profits. Accordingly, we have used Auckland Airport's capex forecasts as a basis for assessing Auckland Airport's expected profitability (discussed in **Chapter 2**).
141. Stakeholders have commented favourably on Auckland Airport's approach to consultation and engagement, and the outcomes have generally been acceptable to participants.
142. Auckland Airport's capex 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 independently peer reviewed. This indicates Auckland Airport has applied a high level of rigour in the costing of its forecast capex plans.

⁶⁸ 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.

⁶⁹ 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.

- 143. Our review of Auckland Airport's historic capex compared to forecast does not provide evidence of planned under-investment, or over-investment, or bias. Nor do we see evidence of a strategy to gain from delaying projects.
- 144. 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.
- 145. 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.
- 146. 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.
- 147. We have assessed how sensitive our assessment of Auckland Airport's expected returns are to its capex forecasts, and found that:
 - 147.1 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
 - 147.2 if 50% of the 2018 and 2019 capex is delayed by two years, Auckland Airport's expected returns increases by 0.4 percentage points to 7.5%.
- 148. 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. However, we have not seen evidence to suggest that the risk of outcomes being different to forecasts is likely to be in the airport's favour.
- 149. 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 capex projects on the basis that projects reprioritisation 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.
- 150. Lastly, we acknowledge the significant size of these capex plans, and likelihood that outcomes will differ from forecasts. As these plans are progressed, the governance and consultation framework in place appears to provide airlines with reasonable opportunity to monitor Auckland Airport's performance in carrying out its capex plans and to assess proposed changes to these plans. We also note that we have the ability in future to undertake ex-post analysis of Auckland Airport's performance, including comparing its actual investment to forecasts.

Our approach to assessing Auckland Airport's capital expenditure forecasts

151. We assessed whether there are any significant concerns that Auckland Airport's capex forecasts for the PSE3 period do not provide for investment that is appropriate, efficient, and at a quality that reflects consumer demands.
152. We assessed this by considering:
 - 152.1 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);
 - 152.2 whether planned investments are expected to occur at an appropriate time (ie, whether the Airport is investing at the right time); and
 - 152.3 whether the airport is expected to provide services at a quality that reflects consumer demands including whether:
 - 152.3.1 Auckland Airport's capex plan is likely to address past or current service quality issues; and
 - 152.3.2 Auckland Airport is investing in assets that are likely to provide services at the quality which consumers want in the future.
153. We also considered:
 - 153.1 whether the investment plan has been costed inappropriately;
 - 153.2 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
 - 153.3 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

154. Our analysis of Auckland Airport's capex relies to a large extent on:
 - 154.1 submissions received as part of this review of the PSE3 disclosure; and
 - 154.2 analysis of Auckland Airport's actual capex expenditure over the PSE2 period against its forecasts for that period.⁷⁰

⁷⁰ 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 information for PSE2 and can compare this against PSE2 forecasts to draw inferences about potential risks to the delivery of planned PSE3 investments.

- 155. Consistent with section 4C of the Airport Authorities Act 1966, Auckland Airport consulted major airlines on its capex 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.
- 156. Under information disclosure regulation, airports are required to provide:
 - 156.1 ten year forecasts of its capex at each price setting event; and
 - 156.2 actual capex compared to forecast capex annually.
- 157. We have not undertaken a detailed review of Auckland Airport's capex 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

- 158. 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.
- 159. 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 in order to ensure that it is able to provide sufficient capacity and quality services now and in the future.⁷¹
- 160. 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 aeronautical pricing assets set aside for the second runway infrastructure over the PSE3 period (subject to certain triggers being met).
- 161. 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. 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

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

⁷¹ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 61.

163. Auckland Airport's approach to consultation and engagement is generally viewed favourably by stakeholders, who have noted that:
- 163.1 its consultation on capital expenditure projects is probably the best of any airport in New Zealand;⁷²
 - 163.2 it is willing to work with airlines and agencies to deliver quality improvements, including the development of meaningful Service Level Agreements (SLAs);⁷³ and
 - 163.3 it is willing to discuss offering different prices to individual airlines that are interested in receiving a different level of service.⁷⁴
164. The outcomes from Auckland Airport's consultation and engagement also appear to be generally acceptable to stakeholders, for example:
- 164.1 Air New Zealand stated that it supported the investment pathway;⁷⁵ and
 - 164.2 BARNZ noted that the projects in the capex plan are generally supported by airlines and considered to be necessary to meet demand at the airport.⁷⁶
165. 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.
166. 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 capex consultation process

167. Auckland Airport notes that the capital investment consultation model that has been in place at the airport 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.⁷⁷
168. Auckland Airport states it was responsive to airline requirements and changing market conditions throughout the PSE2 period. All major changes to the capital plan

⁷² BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 19.

⁷³ BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), Table 3 Row 14.

⁷⁴ BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 5.

⁷⁵ 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.

⁷⁶ BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), pages 18-19.

⁷⁷ 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.

set out in pricing for PSE2 were consulted on with its major airline customers and BARNZ, and Auckland Airport considers that airlines supported the repurposed programme.⁷⁸

169. 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.⁷⁹
170. Auckland Airport has submitted that BARNZ has acknowledged this is a suitable governance framework for upcoming capital projects, which BARNZ and other airlines are participating in.⁸⁰
171. 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 in fact be an increase in airline requirements compared to the assumptions that underpin the base case capital expenditure forecast.⁸¹

Airlines' views on the capex consultation process

172. BARNZ and Air New Zealand generally support the investment programme:
 - 172.1 BARNZ notes that Auckland Airport's consultation on capital expenditure projects is probably the best of any airport in New Zealand. Although there is some inconsistency in approach between projects, BARNZ considers that Auckland Airport engages well overall.⁸²
 - 172.2 BARNZ states that the airport is willing to work with airlines and agencies to deliver quality improvements, including the development of meaningful SLAs. It expects to start discussing SLAs with the airport in the near future.⁸³
 - 172.3 In its feedback on the draft PSE3 pricing disclosure, Air New Zealand noted the significant investment programme, and stated that it supported the investment pathway. It did not raise any concerns about the level of detail in

⁷⁸ 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.

⁷⁹ 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.

⁸⁰ 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.

⁸¹ 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.

⁸² BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 19.

⁸³ 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.

the capital plan or question the reasonableness of the forecast costs. Air New Zealand noted it is committed to continuing to work with Auckland Airport as the investment pathway was further defined and more detailed analysis and design was completed on the individual components of the capital plan. Air New Zealand confirmed its support for the proposed investment pathway in its feedback on the Revised Pricing Proposal in April 2017 and to Auckland Airport's Board sub-committee.⁸⁴

173. We note that Qantas did raise some concern about the level of forecast investment, stating that there are still significant questions over the quantum, staging and deliverability of several projects.⁸⁵
174. 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 understand the Airport is willing to discuss offering different prices to individual airlines that are interested in receiving a different level of service.”⁸⁶

175. 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.⁸⁷

Planned investment is generally occurring at an appropriate time

176. As discussed in the previous section, airlines generally support Auckland Airport's capex plan,⁸⁸ 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

177. 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

⁸⁴ 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.

⁸⁵ 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.

⁸⁶ BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), page 5.

⁸⁷ 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.

⁸⁸ 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.

Auckland Airport on the best location of the new integrated terminal facility and commissioned Intervista Consulting, who completed concept planning for the alternative “southern” terminal option, and delivered this work to Auckland Airport in March 2012.⁸⁹

178. It also notes that the capital expenditure projections to deliver the Southern Terminal Option remain high-level cost estimates and 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.⁹⁰
179. 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 this is not expected to be ready until 2020, while the area already has insufficient capacity at peak times and is the current primary constraint at the international terminal.⁹¹
180. 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.⁹²

Our response

181. Overall, we do not consider that the planned timing of Auckland Airport’s investment for the PSE3 period is inappropriate.
182. 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.
183. While airlines are concerned that this investment is occurring too late, at the time of setting price for PSE2, we concluded that Auckland Airport’s decision to exclude any capex in the new domestic jet terminal from PSE2 pricing was reasonable and appeared to be in response to airlines’ concerns.⁹³

⁸⁹ 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.

⁹⁰ 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.

⁹¹ BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), page 18 - 19.

⁹² BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), page 23.

⁹³ 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.

184. We note that when setting prices for the PSE2 period, Auckland Airport indicated that:
- 184.1 it still expected to commission this project during the PSE2 period; and
 - 184.2 it would recover any associated costs incurred during the PSE2 period as a separate investment charge, that would be determined following consultation with stakeholders.
185. Airports generally set prices every five years. If Auckland Airport had wished to introduce additional capital expenditure charges earlier than originally forecast it 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.
186. We note that airlines have identified other investment that could have occurred earlier to respond to capacity constraints. However, Auckland Airport did bring forward some investment over the PSE2 period without imposing additional charges on airlines, to respond to increased demand.

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

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

187. Both Auckland Airport and airlines agree that Auckland Airport may experience some ongoing quality concerns over the PSE3 period. 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:
- 187.1 Auckland Airport's customer survey results are still reasonable and largely consistent with other airports;
 - 187.2 it appears that Auckland Airport's investment programme will address a number of the quality concerns raised by airlines in the longer term; and
 - 187.3 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?

188. 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.

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

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

190. Auckland Airport states that it recognises that service performance will be a key focus for PSE3, and that Auckland Airport remains committed to providing quality services to its customers.⁹⁴
191. Auckland Airport notes that it reports regularly to its Board on the service quality metrics embedded within 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 shows a number of positive quality outcomes:
- 191.1 Service reliability remains high at Auckland Airport, with a high availability of core services (available 99.9% - 100% of the time) and corresponding low number and duration of outages – particularly as the traffic handled at Auckland Airport has “grown exponentially” over the PSE2 period.⁹⁵
 - 191.2 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).⁹⁶
192. 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.⁹⁷

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

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

⁹⁴ 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.

⁹⁵ 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.

⁹⁶ 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.

⁹⁷ 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.

have been driven by investment that has not kept pace with the levels of passenger growth.⁹⁸

194. 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 PSE3.⁹⁹
195. 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 FY2016.¹⁰⁰
196. 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. It 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).¹⁰¹
197. BARNZ also stated that customer survey scores are reasonable.¹⁰²
198. BARNZ considers that generally Auckland Airport is willing to respond to customer concerns and help them deliver better services. BARNZ explained that the airport listened to airline concerns over the bussing product and has made changes in response (bringing forward contact gate investment, investing in Aviramps and better-quality busses). It also noted that the airport has introduced ground power at international gates and stands, which assists aircraft efficiency.¹⁰³

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

199. 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

⁹⁸ 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.

⁹⁹ 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.

¹⁰⁰ 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.

¹⁰¹ 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.

¹⁰² 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.

¹⁰³ BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), page 2.

provide better and faster passenger journeys to the airport and airport terminals, and a good quality of service to its passengers and airlines.¹⁰⁴

200. 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.¹⁰⁵
201. 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.¹⁰⁶
202. 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.¹⁰⁷
203. 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 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.¹⁰⁸

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

204. 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

¹⁰⁴ 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.

¹⁰⁵ 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.

¹⁰⁶ 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.

¹⁰⁷ 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.

¹⁰⁸ 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.

will be met, as many projects in the capital expenditure plan for PSE3 are in the early stages of planning.¹⁰⁹

205. BARNZ has noted 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). It notes that some airlines may be happy to receive a lower quality of service in some areas if their charges were lower, while others may be willing to pay more for a better service. BARNZ notes that 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, it understands the airport is willing to discuss offering different prices to individual airlines that are interested in receiving a different level of service.¹¹⁰

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

206. Auckland Airport notes that it had its cost estimates for the Terminal Development Plan generated by expert quantity surveyor, Beca. It then had these cost estimates independently peer reviewed by the engineering consultancy AECOM.¹¹¹ This indicates Auckland Airport has applied a high level of rigour in the costing of its forecast capex plans.
207. On this basis we have used the airport's capex forecasts as an input to our profitability analysis (discussed in **Chapter 2**).
208. We have assessed how sensitive our assessment of Auckland Airport's expected returns are to its capex forecasts. We have found that increasing the capex 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 capex 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%).
209. 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.¹¹²
210. We do agree however, that spending on 'other capital' was significant over the PSE2 period. Auckland Airport spent \$158m against a forecast \$88m. Given 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.

¹⁰⁹ 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.

¹¹⁰ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 5.

¹¹¹ The terminal development plan is the single largest capital project for PSE3.

¹¹² 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).

211. Further, it would be useful to understand the criteria/threshold that Auckland Airport uses when deciding whether to classify a project as a key capital project or include it as ‘other capital’. We note in Auckland Airport’s PSE3 forecast ‘other capital’ is forecast to fall below 1%, which implies a high degree of confidence that the vast majority of capital expenditure requirements for PSE3 will be met through forecast key capital projects.
212. Our assessment in this section takes account of stakeholders’ views, which we discuss in more detail below.

Stakeholders’ views on the capex cost estimates

213. Auckland Airport notes that through the extensive process of developing the central base case, the cost estimates were rigorously tested internally and informed by airline feedback throughout and that some airlines involved a quantity surveyor. Auckland Airport also notes that it had the cost estimates generated by BECA for the Terminal Development Plan, independently peer reviewed by AECOM.¹¹³
214. Air New Zealand has noted that “[t]o maximise returns under the current regulatory settings, the airport is incentivised to price above its true expected capital expenditure, and then either deliver that capital expenditure more cheaply, or more slowly, or both”.¹¹⁴
215. 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.¹¹⁵
216. BARNZ noted that the airlines it represents and Auckland Airport share the objective of achieving the capital projects. BARNZ has also 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 seems to have been set at the upper end of the potential range rather than the mid-point.¹¹⁶
217. Auckland Airport responded to BARNZ’s submission by indicating that it considered the reporting by Forsyth Barr on its investor day to be inaccurate. In particular, Auckland Airport notes that:

¹¹³ 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.

¹¹⁴ 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 34.

¹¹⁵ 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.

¹¹⁶ BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), page 19.

- 217.1 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);
 - 217.2 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
 - 217.3 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.¹¹⁷
218. BARNZ also noted however, that there was a very large amount of expenditure on ‘other capital expenditure’ and non-forecast projects that was greater than in the PSE2 forecast. 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.¹¹⁸

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 capex forecast

- 219. 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, any efficiency gains and losses may be rewarded differently depending on the year in which they occur. This time inconsistency can create incentives for airports to delay efficiency improvements.
- 220. The incentive for airports to delay efficiency improvement under information disclosure regulation may be weaker than 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.

¹¹⁷ 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.

¹¹⁸ BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), pages 21-22.

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

221. 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.
222. While there is a perceived 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.
223. Stakeholders have raised concerns of under-investment and projects being delayed to the benefit of the airport. This is discussed below, followed by Auckland Airport's and our response.

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

224. 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 would have made a significant contribution to the required aeronautical infrastructure investments, but the regulatory regime allowed for the shareholders to benefit instead.¹¹⁹
225. 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. Air New Zealand considers Auckland Airport is 'stacking the regulatory deck' such that the over-recoveries of PSE2 will be repeated in PSE3.¹²⁰
226. 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.¹²¹
227. BARNZ noted that Auckland Airport forecast commissioned asset values totalling \$236m over FY2013-FY2016 against the airport's actual commissioned asset values over these years was \$228m. BARNZ notes that it therefore appears that Auckland Airport only slightly underspent, however, the pattern of asset commissioning

¹¹⁹ 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.

¹²⁰ 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 44.

¹²¹ 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.

provides a different view, with underspend in the first years of the period and significant overspend in the final year.¹²²

- 228. 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.¹²³
- 229. BARNZ also 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 investment until later in the pricing period, which would be consistent with the incentives faced by Auckland Airport in the pricing framework.¹²⁴
- 230. BARNZ provided a review of the 23 projects listed in Auckland Airport's PSE2 Schedule 18 disclosure. It submitted the following:
 - 230.1 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.
 - 230.2 There was a very large (>30%) underspend in five projects: check-in, stand 1, stand 2, Pier B, Taxiway Lima.
 - 230.3 There was a greater than 30% overspend in one project: asphalt apron replacement.
 - 230.4 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.
 - 230.5 There has been substantial un-forecast expenditure on projects not included in the PSE2 capital expenditure plan, totalling \$69m in FY2015 and FY2016.
 - 230.6 'Other capital expenditure' was forecast to be \$71m over FY2013-FY2016, but was actually \$114m over those years.¹²⁵

¹²² BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 20-21.

¹²³ 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.

¹²⁴ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 20–21.

¹²⁵ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 21–22.

- 231. 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.¹²⁶
- 232. 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.¹²⁷
- 233. 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:
 - 233.1 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;
 - 233.2 ultimately, once conditions had changed, it agreed to go ahead and build it anyway;
 - 233.3 the capital return was solely to achieve credit rating stability as Auckland Airport was on credit watch positive; and
 - 233.4 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.¹²⁸
- 234. 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.
- 235. 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

- 236. We recognise there may be an incentive for airports to overstate capital expenditure 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

¹²⁶ 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.

¹²⁷ 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.

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 28.

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).

- 237. However, our review of Auckland Airport's historic capex compared to forecast does not provide evidence of planned under-investment, or over-investment, or bias. Nor do we see evidence of a strategy to gain from delaying projects.
- 238. Over PSE2, we do not see evidence of a strategy to gain from delaying projects:
 - 238.1 based on the numbers in Table 3.1 below, 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; and
 - 238.2 delays to Auckland Airport's capex 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.

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

- 239. We disagree with BARNZ's suggestion that in most projects the amount budgeted was ultimately underspent or not spent at all. This is because:
 - 239.1 the key capital projects for PSE2 that were forecast and begun in PSE2 actually had a net overspend;
 - 239.2 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
 - 239.3 overall across PSE2, Auckland Airport spent \$522m against a \$290m forecast over PSE2, meaning it invested \$232 million more than forecast.
- 240. We also note the large expenditure on un-forecast projects from 2015 onwards, but understand that airlines were closely engaged in the development and approval of these un-forecast projects.
- 241. We have tested the impact of a change in timing of Auckland Airport's capital expenditure forecasts by assuming 50% of 2018 and 2019 capex 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%.

242. Lastly, we acknowledge the significant size of these capex plans, and likelihood that outcomes will differ to forecasts. As these plans are progressed, the governance and consultation framework in place appears to provide airlines with reasonable opportunity to monitor Auckland Airport's performance in carrying out its capex plans and to assess proposed changes to these plans. We also note that we have the ability in future to undertake ex-post analysis of Auckland Airport's performance, including comparing its actual investment to forecasts.

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

243. 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.
244. We consider that risks should be allocated to suppliers or consumers depending on which are best placed to manage them.¹²⁹ Applying this principle in the context of Part 4 regulation promotes the section 52A(1)(a)-(d) outcomes for the long-term benefit of consumers in a similar way as if those outcomes are promoted in workably competitive markets.¹³⁰
245. We note that actual capital expenditure may differ from forecast levels for several reasons, including:
- 245.1 the forecast was reasonable, but the airport failed to deliver the projects on time/within budget (for example due to inefficiencies);
 - 245.2 the forecast was reasonable, but actual expenditure was lower due to efficiency gains;
 - 245.3 the forecast was deliberately set above the efficient level, so that the airport would profit from outperforming the forecast without necessarily being efficient; and
 - 245.4 the forecast was inaccurate due to the inherent uncertainty regarding key inputs.
246. 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 capex, and this has implications around which party is best placed to manage the risks. Relevant types of risk are included below.

¹²⁹ Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" (22 December 2010), paragraph 2.6.4, 5.29, 8.20; Commerce Commission "Setting the customised price quality path for Orion New Zealand Limited" (29 November 2013), paragraph B22.

¹³⁰ Commerce Commission "Input methodologies review decision – Framework for the IM review" (20 December 2016), paragraphs 124-127 and 131.

- 246.1 **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.
- 246.2 **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 capex efficiency incentives for Auckland Airport, and the benefits of any capex 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.
- 246.3 **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.
- 246.4 **Forecast error risk** - even though there is inherent uncertainty regarding key inputs, Auckland Airport is still better placed than airlines to do the capex 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.
247. 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.¹³¹ 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.
248. 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.
249. 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

¹³¹ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 21.

period.¹³² 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.

- 250. 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. 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".¹³³ 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".¹³⁴
- 251. 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

- 252. 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.¹³⁵
- 253. 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).¹³⁶
- 254. 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 PSE3.¹³⁷
- 255. 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

¹³² Auckland Airport identified the possibility of a similar consultation approach with respect to the domestic terminal upgrade in PSE2.

¹³³ Commerce Commission *Input methodologies review decisions – Topic paper 5 – Airports profitability assessment – 20 December 2016* (20 December 2016), paragraph 388.

¹³⁴ Commerce Commission *Input methodologies review decisions – Topic paper 5 – Airports profitability assessment – 20 December 2016* (20 December 2016), paragraph 390.

¹³⁵ 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.

¹³⁶ 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.

¹³⁷ 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.

considers that a capital expenditure wash-up is not required, or consistent with encouraging efficient investment delivery over PSE3.¹³⁸

- 256. 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.¹³⁹
- 257. 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).¹⁴⁰
- 258. 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:
 - 258.1 the significant step-up required within Auckland Airport itself over historical performance;
 - 258.2 the complexities associated with building in an operating airport environment;
 - 258.3 the significant interdependencies between projects required to stage the construction; and
 - 258.4 the current market for construction services in New Zealand.¹⁴¹
- 259. 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.¹⁴²
- 260. Qantas also notes that delays or overestimations in capital plans are effectively prefunding 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

¹³⁸ 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.

¹³⁹ 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.

¹⁴⁰ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 21.

¹⁴¹ 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.

¹⁴² 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.

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.¹⁴³

261. NZAA argues that there should be no expectation or assumption that the size of a capital expenditure programme requires risk allocation adjustments.¹⁴⁴
262. 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.¹⁴⁵
263. 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.¹⁴⁶
264. 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.¹⁴⁷
265. 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.¹⁴⁸
266. 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

¹⁴³ 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.

¹⁴⁴ 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.

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 23.

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 23.

¹⁴⁷ 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.

¹⁴⁸ 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.

addition, Auckland Airport noted that robust consultation that supports the delivery of the right investment in an efficient and timely manner is important.¹⁴⁹

- 267. 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.¹⁵⁰
- 268. Finally, Auckland Airport notes that:
 - 268.1 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
 - 268.2 although BARNZ considered a wash-up was appropriate, this was not a key issue that it raised with Auckland Airport's Board sub-committee.¹⁵¹

¹⁴⁹ 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.

¹⁵⁰ 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.

¹⁵¹ 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

- 269. This chapter contains our analysis and draft conclusions on the extent to which Auckland Airport has incentives to set prices that are likely to promote efficiency (section 52A(1)(b) of the Act).
- 270. This chapter focusses on whether Auckland Airport's pricing methodology is likely to result in prices which raise efficiency concerns. This includes consideration of whether Auckland Airport's contingent RLC provides for efficient pricing.

Draft Conclusions

- 271. Overall, we consider that Auckland Airport's approach for PSE3 shows that it has continued to seek improvements to the efficiency of its prices. There have been several positive steps, including the introduction of:
 - 271.1 differential charges for domestic passengers travelling on trunk and regional routes, further reducing the likelihood of cross-subsidisation between customer groups;
 - 271.2 parking charges for planes with time on the ground over six hours (with specified exemptions), in order to improve stand and apron efficiency; and
 - 271.3 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.
- 272. We consider that Auckland Airport's decision to not include peak pricing for PSE3 does not necessarily raise any significant efficiency concerns. Although there has been significant demand growth since PSE2, submissions from airlines suggest there may be little demand response to congestion charging. However, we note this lack of demand response may indicate there is room to increase charges at peak times while lowering charges to off-peak users who may be more responsive, and thereby increase overall demand. This is an area which would benefit from greater consideration.
- 273. Auckland Airport also appears to have continued to set prices transparently in PSE3, and has had regard to price stability and certainty for stakeholders.
- 274. We consider Auckland Airport's RLC is not necessarily inconsistent with efficient pricing. This assessment is based on our consideration of the context and nature of this specific RLC.

Our approach to assessing Auckland Airport's pricing methodology

275. Consistent with our approach in the s56G review, we consider that the principles below reflect the main objectives of efficient pricing.¹⁵²
- 275.1 Prices should be subsidy free.
 - 275.2 prices should have regard to consumers' demand responsiveness.
 - 275.3 Where a good or service is scarce, the price should ensure that the good or service is consumed by those that value it the most.
 - 275.4 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.
 - 275.5 The development of prices should be transparent, and promote price stability and certainty for consumers, where demanded.
276. In our Process and Issues paper, we said we intended to consider whether there are any concerns that prices have been set inefficiently. For Auckland Airport, we noted this would include considering whether the absence of congestion charging could send inefficient signals about the timing of its planned second runway.¹⁵³
277. While we have given consideration to each of the aspects of pricing efficiency, we have focussed on whether Auckland Airport has set prices to encourage scarce regulated airport services to be consumed by those that value them the most.
278. We also consider whether the Auckland Airport's RLC provides for efficient prices.

Analysis of Auckland Airport's pricing methodology against efficient pricing principles:

Prices should be subsidy free¹⁵⁴

279. In PSE2 we indicated that to be subsidy free, prices should be equal to or greater than incremental costs, and less than or equal to standalone costs.¹⁵⁵ However, we

¹⁵² 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.

¹⁵³ Commerce Commission "Have your say on the review of Auckland and Christchurch Airports' third price setting events (July 2017 – June 2022): Process and issues paper" (20 October 2017), paragraph 22.1.

¹⁵⁴ Subsidy free prices are generally a necessary but not sufficient condition for efficient pricing.

¹⁵⁵ The incremental cost is the cost of producing another service. The standalone cost is the cost that would have occurred if the supplier solely undertook that activity. 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.

recognised there may be instances where it is not efficient for these criteria to be met.¹⁵⁶

- 280. 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 PSE2.¹⁵⁷
- 281. 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 which currently still benefit from a simpler process.
- 282. 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.¹⁵⁸
- 283. Our draft conclusion for PSE3 is that Auckland Airport has again made incremental improvements to better reflect the principle of being subsidy free. We consider that the introduction of differential charges for domestic passengers travelling on trunk and regional routes is consistent with this principle.

Prices should have regard to consumers' demand responsiveness

- 284. In an industry with high fixed costs, such as airports, prices based on efficient incremental costs would under-recover the required revenues. 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 is likely to minimise distortions to the efficient use of airport services.
- 285. 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.¹⁵⁹
- 286. Auckland Airport has continued with this approach to the allocation of common costs, so has again had regard to consumers' demand responsiveness in PSE3.

¹⁵⁶ For example, if the cost of collecting the information to ensure that the price charged to each individual consumer is subsidy free outweighs the benefits of setting prices that are subsidy free.

¹⁵⁷ 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.

¹⁵⁸ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 8.

¹⁵⁹ 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.

287. BARNZ has argued that while international charges are generally higher, demand for domestic travel is usually less elastic than international travel. BARNZ is not 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.¹⁶⁰ We note that BARNZ raised similar concerns during the section 56G review.¹⁶¹
288. However, contrary to BARNZ's submission, Auckland Airport's pricing disclosure states it considers domestic passengers have a higher price elasticity.¹⁶² This view appears to be supported by a 2007 report on air travel demand elasticities, which found that fare elasticities on short-haul routes were generally higher than long-haul routes.¹⁶³
289. Consistent with our findings on Auckland Airport's PSE2, our draft conclusion is that Auckland Airport has considered demand responsiveness of different consumer groups in its pricing methodology. However, we discuss below how the airport could have given greater consideration to differentiating 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 ensure that the good or service is consumed by those that value it the most

290. Scarcity at airports may arise through congestion at facilities, and a lack of capacity where required. 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.
291. 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 PSE2.¹⁶⁴
- 291.1 At the time Auckland Airport considered it too early to introduce congestion charges and instead looked to airline and Airways' (New Zealand's air

¹⁶⁰ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 7.

¹⁶¹ 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.

¹⁶² Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 71.

¹⁶³ InterVISTAS Consulting Inc "Estimating Air Travel Demand Elasticities – Final Report" (28 December 2007), page i.

¹⁶⁴ 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.

navigation service provider) processes and procedures to maximise use of the existing runway.¹⁶⁵

- 291.2 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.¹⁶⁶
- 291.3 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.¹⁶⁷
- 292. Auckland Airport subsequently experienced significant demand growth over PSE2 and the runway is now congested at certain times of the day.
- 293. 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.
- 294. To the extent that demand is more unresponsive to price changes at peak periods, this would suggest that setting peak prices higher than off-peak prices would be more consistent with Ramsey pricing principles than simply setting constant prices. 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.¹⁶⁸.
- 295. Despite this, Auckland Airport has not introduced any differential charges between peak- and non-peak users, or congestion charging for PSE3. Auckland Airport made the following points.
 - 295.1 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.¹⁶⁹

¹⁶⁵ Commerce Commission, Transcript of Auckland Airport Section 56G Conference, held on 26 February 2013, pages 82-83.

¹⁶⁶ Commerce Commission, Transcript of Auckland Airport Section 56G Conference, held on 26 February 2013, pages 83-84.

¹⁶⁷ 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.

¹⁶⁸ This should promote allocative efficiency. Here the degree to which the charges users pay contributes to fixed costs will reflect their demand reaction to a higher (or lower) price. Hence the most price sensitive customers pay the least to avoid them being inefficiently priced off the airport.

¹⁶⁹ 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.

- 295.2 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.¹⁷⁰
296. An expert report by Estina for Auckland Airport addressed the issue of peak differentials in detail.¹⁷¹ 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.
297. Ultimately, Estina concluded that “there is no compelling case to introduce peak charging for PSE3 at Auckland Airport”.¹⁷² In particular, Estina made the following points.
- 297.1 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.
- 297.2 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 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.
298. 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”.¹⁷³ BARNZ explained that:¹⁷⁴
- 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.
299. Similarly, Air New Zealand submitted (emphasis added):¹⁷⁵
- 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**

¹⁷⁰ 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.

¹⁷¹ 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).

¹⁷² 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.

¹⁷³ 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.

¹⁷⁴ 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.

¹⁷⁵ 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.

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.

300. Submissions from BARNZ and Air New Zealand 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":¹⁷⁶

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.

301. The International Civil Aviation Organization (ICAO) also 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".¹⁷⁷
302. These views suggest airlines are unlikely to meaningfully alter their demand at peak times to reduce congestion. However, this is not necessarily inconsistent with Ramsey pricing principles, which seek to recover fixed costs with the least distortion in the use of regulated airport services. Price differentials between peak and off-peak times would improve allocative efficiency if they resulted in increased use of regulated airport services (output), relative to the output when a common price is applied.
303. For example, lower charges at off-peak times (offset by higher charges at peak times) could encourage an airline (existing or new) to schedule additional services into off-peak times. Submissions were focussed on an increase in peak charges being unlikely to affect demand. The question remains whether the consequential decrease in off-peak charges would increase demand, and thereby be more allocatively efficient.

¹⁷⁶ IATA "Peak/Off-Peak Charges".

¹⁷⁷ ICAO "Airport Economics Manual – doc 9562" (Third edition – 2013), paragraph 4.148.

- 304. We recognise that by placing itself under a price cap, Auckland Airport should have the incentive to increase demand including through how it prices. We discuss other initiatives undertaken by Auckland Airport to generate demand for the airport at page 126. These may be a practical approach to the same issue whereby these initiatives act as form of price decrease to marginal customers.
- 305. Nonetheless, greater consideration to the benefits of lower off-peak charges (in addition to higher peak charges) would help us and others assess the overall efficiency of Auckland Airport's pricing.
- 306. Overall, our draft conclusion is that Auckland Airport's decision not to include peak pricing over the PSE3 period does not necessarily raise any significant efficiency concerns. The submissions from BARNZ and Air New Zealand, and the views of IATA and ICAO, suggest there may be little demand response from airlines. Consequently peak pricing will probably not make much difference to congestion and thereby improve efficiency.
- 307. However the potential to lower off-peak pricing implicit in peak pricing could be a more efficient way to recoup Auckland Airport's fixed costs and increase airport utilisation. This is an area Auckland Airport's price setting should have given greater consideration to. Nonetheless we do not have reasons to believe their pricing is necessarily inefficient.

Prices should enable price-quality trade-offs

- 308. 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.
- 309. 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.¹⁷⁸
- 310. For the PSE3 period, Auckland Airport has introduced:
 - 310.1 parking charges for planes with time on the ground over six hours (with specified exemptions), in order to improve stand and apron efficiency; and
 - 310.2 differentiated charges for check-in services, to distinguish between traditional check-in counters, common-use bag drop facilities and dedicated kiosk/bag drop facilities.

¹⁷⁸ 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.

- 311. 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).¹⁷⁹
- 312. 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).¹⁸⁰ However, it acknowledged that price signals for such items may well be unduly complex to implement.¹⁸¹
- 313. Auckland Airport also noted that the structure of check-in charges is intended to promote optimal use of scarce resources. 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).¹⁸²
- 314. Our draft 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

- 315. 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.
- 316. As discussed above, Auckland Airport indicated 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 time where this was considered appropriate.
- 317. BARNZ has indicated that Auckland Airport's pricing methodology appears relatively stable and the changes being made to it for PSE3 are mostly incremental.¹⁸³
- 318. BARNZ also stated that Auckland Airport's pricing development process is transparent to substantial customers. Auckland Airport consults extensively on its

¹⁷⁹ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 6.

¹⁸⁰ The trade-off between remote or contact stands includes consideration of bussing.

¹⁸¹ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 8.

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 2.

¹⁸³ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 7.

prices with substantial customers, providing descriptions and explanations of its proposals. However, BARNZ also noted that:¹⁸⁴

- 318.1 the Airport does not fully consult stakeholders other than the substantial customers; and
 - 318.2 it would have been helpful if the airport's pricing model provided a direct link between changes in input costs and changes in prices.
319. Our draft conclusion is that Auckland Airport appears to have continued to set prices transparently in PSE3, and has had regard to price stability and certainty for stakeholders. While we acknowledge BARNZ's views above, these appear to be relatively minor issues in the overall context of Auckland Airport's approach to developing prices.

Analysis of whether Auckland Airport's Runway Land Charge provides for efficient prices

320. This section considers whether the RLC provides for efficient prices. **Attachment B** considers whether the RLC impacts Auckland Airport's ability to extract excessive profits.

Description of the RLC

- 321. As discussed in **Chapter 2**, 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, the airport is introducing a RLC.
- 322. 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.

Pricing profile

Peak demand pricing

323. 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. It concluded:¹⁸⁵

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.

¹⁸⁴ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 8.

¹⁸⁵ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 59.

324. A number of submitters commented on the issue of peak-based charging. We discuss the role of differentiating charges between peak- and non-peak users earlier in this chapter (see page 64).
325. 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.
326. Munro Duignan, in its expert report for BARNZ, noted that applying the RLC:¹⁸⁶
- 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.
327. We accept that airlines are unlikely to meaningfully alter their demand at peak times, and as a result peak-based charging is unlikely to have a meaningful impact on reducing congestion. We also accept it may not be possible to identify the extent to which different users can be expected to benefit from the second runway, making it difficult to apportion the RLC on this basis. In particular, it is not clear that it is the current peak time users that stand to benefit most from the second runway. For example, there may currently be off-peak users that will benefit from using the second runway at peak times. In addition, new demand may emerge for peak time slots on the second runway, which generates network efficiencies to the benefit of other airlines and New Zealand airports.
328. The purpose of differentiating prices between peak and non-peak times can also be considered through its potential to minimise the impact on demand in line with Ramsey pricing principles.
329. We concluded in the previous section that Auckland Airport's decision not to include peak pricing over the PSE3 period does not raise any significant efficiency concerns from the perspective of congestion charging. However the potential to lower off-peak pricing implicit in peak pricing could be a more efficient way to recoup Auckland Airport's fixed costs.
330. Consistent with this view, we do not consider Auckland Airport's decision to apply the RLC as a flat-rate charge necessarily raises significant efficiency concerns. Nonetheless, decreasing the charge on non-peak users relative to peak users could improve allocative efficiency, relative to the flat-rate charge, by minimising the impact on demand of these higher charges. Auckland Airport should have given relevant consideration to this.

¹⁸⁶ Munro Duignan "Report on Issues Regarding Auckland Airport's Runway Land Charge" (28 November 2017), page 4.

Mitigating price shocks

- 331. 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”.¹⁸⁷
- 332. 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 shock¹⁸⁸ becomes the key barrier to the realisation of a second runway”.¹⁸⁹
- 333. 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.¹⁹⁰ The Court, in its judgement on the appeal of the Part 4 IMs, noted:¹⁹¹

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.

- 334. 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.”¹⁹²
- 335. In its expert report on behalf of BARNZ, Munro Duignan noted:¹⁹³

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.

- 336. 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.¹⁹⁴

¹⁸⁷ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 57.

¹⁸⁸ 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.

¹⁸⁹ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 57.

¹⁹⁰ 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.

¹⁹¹ Wellington International Airport Ltd v Commerce Commission [2013] NZHC 3289 at [919].

¹⁹² 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.

¹⁹³ Munro Duignan “Report on Issues Regarding Auckland Airport’s Runway Land Charge” (28 November 2017), page 5.

¹⁹⁴ 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.

- 337. We acknowledge Auckland Airport's stated objective of mitigating a price shock at the time of commissioning the second runway. However, we consider there were a range of approaches available to Auckland Airport to achieve this goal.
- 338. 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.¹⁹⁵ Auckland Airport could potentially adopt a similar approach to mitigate future price shocks.
- 339. We have also 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:¹⁹⁶

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.

- 340. 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.¹⁹⁷
- 341. However, while we do not consider Auckland Airport's stated objective of mitigating a price shock provides a strong basis for its adopted approach, we have not seen evidence to convince us that Auckland Airport's approach is inconsistent with efficient pricing.

Inter-generational and inter-airline equity

- 342. 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".¹⁹⁸
- 343. To put it another way, BARNZ is suggesting 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).

¹⁹⁵ Christchurch Airport "Price setting disclosure" (19 December 2012).

¹⁹⁶ Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), paragraph 4.3.76.

¹⁹⁷ 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.

¹⁹⁸ 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.

344. Qantas raised a similar point, suggesting that current airlines that will be charged the RLC will be cross-subsidising future entrants".¹⁹⁹
345. 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 benefit (or detriment) of any action (or lack of action) they take in response to this price.
346. 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.
347. In contrast, Auckland Airport stated that the RLC "ensures a more equitable distribution of currently accruing holding costs over both current and future users".²⁰⁰ 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".²⁰¹
348. That is, Auckland Airport is noting that the RLC is being levied on parties that are exacerbating the need for the second runway. Such an approach can incentivise efficient investment as it sends price signals to those parties that have the greatest influence on determining when the new investment is needed.
349. However, as noted above, BARNZ and Air New Zealand have argued that airlines are unlikely to respond to any price signals arising from the RLC due to the nature of airline scheduling. This suggests the efficiency impact of the RLC or a different time profile of prices might be negligible.
350. As such, while we acknowledge that Auckland Airport's approach may give rise to concerns over inter-generational equity, we do not consider the approach is inconsistent with achieving pricing efficiency.

¹⁹⁹ 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.

²⁰⁰ 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.

²⁰¹ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 57.

Attachment A Our assessment of Auckland Airport's cost of capital

Purpose

- A1 This attachment contains the analysis underpinning our view that, based on the evidence currently before us, 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 draft conclusion that Auckland Airport has not sufficiently justified its expected returns on its total RAB of 7.06%, which is discussed in **Chapter 2**.
- A3 As noted in this attachment, we welcome additional evidence in submissions regarding the appropriateness of Auckland Airport's target return.

Structure of this attachment

- A4 This attachment sets out our:
 - A4.1 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
 - A4.2 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

- A5 This section discusses our approach to assessing Auckland Airport's target return in this review. This approach differs from the section 56G reviews, reflecting changes to the IMs made in 2016.
- A6 This section discusses:
 - A6.1 our past approach in the section 56G reviews, where we primarily focussed on the 75th percentile WACC estimate;
 - A6.2 the changes made in the IM review, which led to us now publishing only a mid-point WACC estimate and associated standard error;
 - A6.3 our mid-point WACC estimate for airports as at 1 April 2017, which is a key reference point for this review; and
 - A6.4 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

- A7 We considered a range from mid-point to 75th percentile when assessing airport profitability in the section 56G reports. We noted that:²⁰²
 - A7.1 the mid-point (50th percentile) was the appropriate starting point;
 - A7.2 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
 - A7.3 the low end of the range (the 25th percentile) was not relevant when considering whether airports were targeting excessive profits.
- A8 Any supplier-specific adjustments to our benchmark cost of capital were rejected in the section 56G reports. We made the following points.²⁰³
 - A8.1 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.
 - A8.2 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 to pay these higher prices.
 - A8.3 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.
- A9 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.²⁰⁴
 - A9.1 We noted that leverage, debt premium and beta could potentially be considered on a supplier-specific basis.
 - A9.2 However, we considered each of these parameters individually and concluded that service-specific estimates would be more appropriate for each of them.

²⁰² 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.

²⁰³ 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.

²⁰⁴ Commerce Commission “Input methodologies (airport services): Reasons paper” (December 2010), paragraph E2.82.

- A10 In the section 56G reports the upper limit of our WACC range (the 75th percentile) effectively became the key benchmark when assessing airport profitability. This was also the percentile that was used when setting price-quality paths for energy businesses at that time.

We now only publish a mid-point WACC following the IM review

- A11 In the 2016 IM review we decided to change our approach, due to two main problems with the previous framework:²⁰⁵
- A11.1 the upper limit of our WACC range had become the de facto benchmark when assessing airport profitability; and
 - A11.2 there was limited and weak rationale for using the 75th percentile as the upper limit of the WACC percentile range.
- A12 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:²⁰⁶
- A12.1 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
 - A12.2 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.

Our mid-point WACC estimate for airports as at 1 April 2017

- A13 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.
- A14 The parameter values used to calculate our airports WACC estimate as at 1 April 2017 are shown in Table A1 below.²⁰⁷

²⁰⁵ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph X4.

²⁰⁶ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), page 3.

²⁰⁷ *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.

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 \times (1 - investor tax rate) + the equity beta \times the tax adjustment market risk premium. The mid-point vanilla WACC is calculated as the cost of equity \times (1 - leverage) + the cost of debt \times leverage.

Our proposed framework for assessing Auckland Airport's target return

- A15 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.
- A16 Our high-level framework for assessing target returns, including the key factors we have considered, is set out below.

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.²⁰⁸
- 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.²⁰⁹
- 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)?²¹⁰
- **If we are not satisfied there are legitimate reasons, then the airport-specific adjustment to that parameter is unjustified.**

²⁰⁸ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph 87.

²⁰⁹ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph 99.

²¹⁰ 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.²¹¹
- 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.**

The role of our mid-point WACC estimate and the appropriate evidentiary burden when considering target returns

A17 NZ Airports submitted that we will need to carefully present our analysis to ensure that we do not reinforce incorrect perceptions that the regulatory mid-point WACC is a bright line benchmark.²¹²

²¹¹ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph 99.

²¹² NZ Airports Association “Cross-submission on process and issues paper on the review of Auckland and Christchurch Airports third price setting for airport services (issues and questions raised)” (19 December 2017), paragraph 10.

- A18 NZ Airports also suggested that it is not possible for each and every element of WACC or targeted returns to be rigorously established by empirical evidence. It stated that, ultimately, reasonable judgement informed by available evidence is required.²¹³
- A19 We agree with NZ Airports that our mid-point WACC estimate is not a bright line. 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:²¹⁴
- ...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.
- ...
- 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.
- A20 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)).²¹⁵
- A21 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 estimate.²¹⁶
- A22 We do not intend to determine an alternative, company-specific, WACC estimate for an airport if we consider it has legitimate reasons for targeting a different return to our mid-point estimate. Instead, we consider it appropriate to base our profitability assessment on our mid-point WACC, but allow for any legitimate differences between the airport’s target return and our benchmark cost of capital when reaching our conclusions on profitability.

²¹³ NZ Airports Association “Submission on process and issues paper on the review of Auckland and Christchurch Airports third price setting for airport services” (28 November 2017), paragraph 37.

²¹⁴ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraphs 59, 94, and 132.

²¹⁵ Commerce Commission “Input methodologies review decisions Topic paper 5: Airports profitability assessment” (20 December 2016), paragraph 52.

²¹⁶ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph 87.

- A23 We agree with NZ Airports that a degree of judgement is required when determining target returns, however we consider that this judgement needs to be supported by evidence. As indicated in the quotes at paragraph A19 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.

The significance of dual till in assessing target returns

- A24 Air New Zealand submitted that airports can earn significant revenue from unregulated complementary activities, and this should be recognised when determining an appropriate return from aeronautical activities. It 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).²¹⁷
- A25 We agree with Air New Zealand that the dual till approach can be relevant when assessing target returns. For example, we 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 under-investment is significantly weaker for airports than for energy businesses. In particular, we noted that airports:²¹⁸
- A25.1 are subject to a dual till structure (whereby 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;
 - A25.2 have regular consultations with a small number of engaged customers – this engagement protects against under-investment 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
 - A25.3 there could be other regulatory requirements (such as safety) that result in the investment being made.
- A26 Although complementary revenue streams are unregulated, they can directly impact incentives to invest in regulated services. Therefore, we noted in the IM review that:²¹⁹

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.

²¹⁷ 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.

²¹⁸ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph 139.

²¹⁹ Commerce Commission “Input methodologies review decisions – Topic paper 6: WACC percentile for airports” (20 December 2016), paragraph 145.

- A27 Consequently, we agree with Air New Zealand that we should recognise the reality that airports are dual till when assessing their target returns.

Consistency in approach between airports and over time

- A28 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.²²⁰
- A29 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.

Assessment of Auckland Airport's target return

Auckland Airport's target return for aeronautical pricing activities is 6.99%

- A30 Auckland Airport has set a target return for aeronautical services of 6.99%, which is equivalent to the 65th percentile of our WACC range estimated as at 1 April 2017.²²¹
- A31 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:
- A31.1 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.
 - A31.2 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).²²²
- A32 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 for each parameter. Auckland Airport noted that it did not seek "to target any particular percentile of the Commission's regulatory WACC estimate".²²³

²²⁰ BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), table 4, row 18.

²²¹ 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.

²²² 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.

²²³ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 33.

Auckland Airport's reasons for targeting above the mid-point of our WACC range

- A33 Auckland Airport's pricing disclosure indicates that there are two main reasons why it targeted a WACC higher than our mid-point estimate.
- A33.1 Auckland Airport considers it has a higher cost of equity than our benchmark, 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.
- A33.2 Auckland Airport has used its own forecast cost of debt for PSE3 of 4.52%, instead of our benchmark of 4.41%.
- A34 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

- A35 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:²²⁴
- 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.
- A36 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:²²⁵

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 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.

- A37 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

²²⁴ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 33.

²²⁵ Commerce Commission "Input methodologies review decisions – Topic paper 6: WACC percentile for airports" (20 December 2016), paragraph 99.

each parameter is an important factor when considering whether the airport's approach is justified.

- A38 Auckland Airport's approach also appears to have caused confusion amongst interested parties. For example:
- A38.1 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.²²⁶
 - A38.2 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".²²⁷
 - A38.3 However, in its cross-submission, 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".²²⁸
- A39 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.²²⁹

We have estimated the materiality of parameter adjustments made by Auckland Airport

- A40 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.
- A41 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

²²⁶ 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.

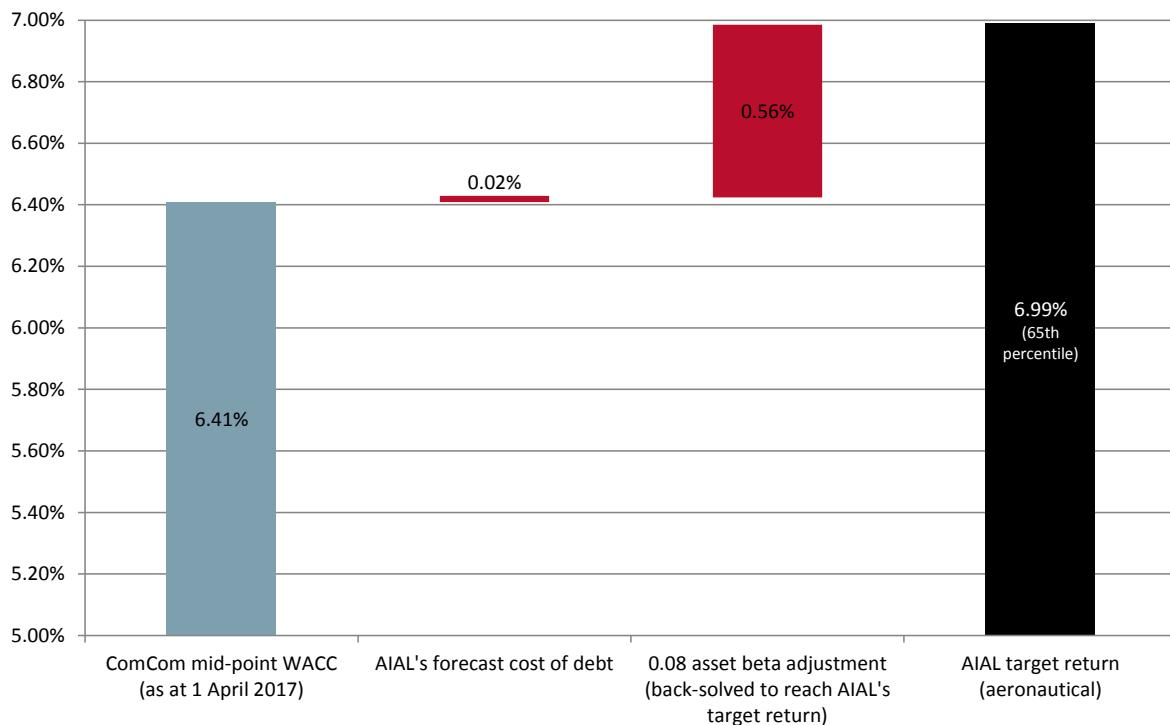
²²⁷ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

²²⁸ 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.

²²⁹ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 29.

return of 6.99% is the most material change relative to our mid-point WACC estimate.

Figure A1 Waterfall chart showing the difference between our mid-point WACC and Auckland Airport's target return

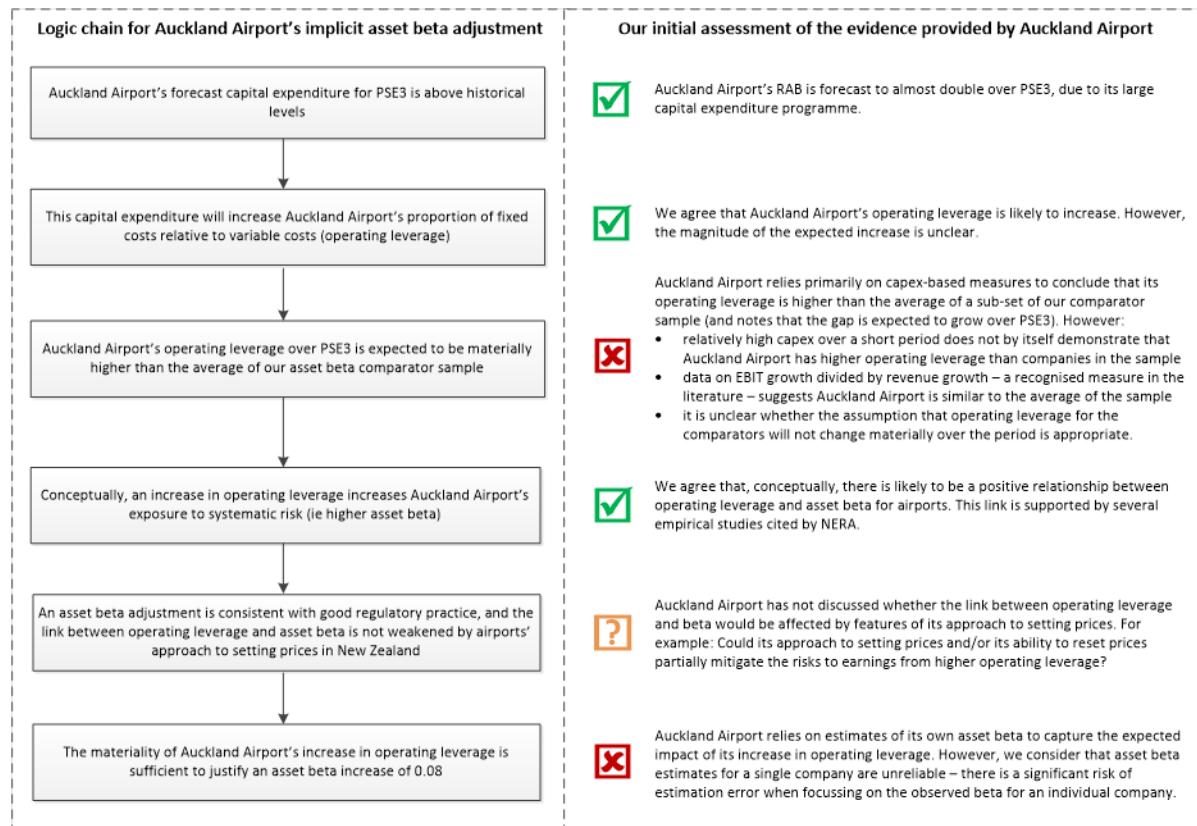


- A42 The sections below discuss our assessment of Auckland Airport's approach to setting its target return. Cost of equity is discussed first, followed by the cost of debt, and finally we consider the overall target return.

Our assessment of Auckland Airport's approach to the cost of equity

- A43 This section discusses Auckland Airport's approach to the cost of equity.
- A44 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 6.99%.
- A45 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 initial assessment of Auckland Airport's implicit asset beta adjustment



A46 We also briefly discuss Auckland Airport's views regarding the tax-adjusted market risk premium.

Does Auckland Airport have legitimate reasons for adopting a higher asset beta?

- A47 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".²³⁰
- A48 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. These include:²³¹
- A48.1 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

²³⁰ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

²³¹ 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.

Commission's comparator sample for which capex performance is available through international performance benchmarking studies.

- A48.2 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 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.
- A48.3 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 (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.
- A48.4 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.
- A48.5 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.

A49 We consider each of these points below.

Is Auckland Airport's historical operating leverage higher than the Commission's asset beta sample?

- A50 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.

Table A2 NERA table showing Auckland Airport's capex 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	Grupo 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>

- A51 However, NERA and Auckland Airport appear to have conflated higher capex and higher operating leverage. Although Table A2 shows that Auckland Airport had relatively high levels of capex in 2015, in our view this does not mean that it has higher operating leverage than the companies in the comparator sample.
- A52 Operating leverage measures the proportion of fixed costs to total costs. We acknowledge that sustained high capex levels over time would be expected to increase operating leverage. However, high capex 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 capex is added, or the proportion of fixed vs variable costs more generally.

- A53 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.²³²
- A54 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.²³³ The degree of operating leverage is measured as:²³⁴

$$\text{Degree of operating leverage} = \frac{\% \Delta EBIT}{\% \Delta \text{revenue}}$$

- A55 EBIT growth divided by revenue growth is a recognised measure of operating leverage. For example, Professor Damodaran notes that (emphasis added):²³⁵

...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.

- A56 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 to support that "companies with high operating leverage tend to have high betas".²³⁶
- A56.1 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

²³² 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.

²³³ 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."

²³⁴ 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.

²³⁵ Aswath Damodaran "Estimating risk parameters", pages 24-25.

²³⁶ NERA "Target Return and WACC for Auckland Airport – Response to John Small Paper" (23 May 2017), page 5, footnote 8.

(EBIT) to the percentage change in unit sales".²³⁷ 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".²³⁸

- A56.2 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".²³⁹
- A56.3 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 taxes than a company producing a similar product with low operating leverage".²⁴⁰

²³⁷ 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.

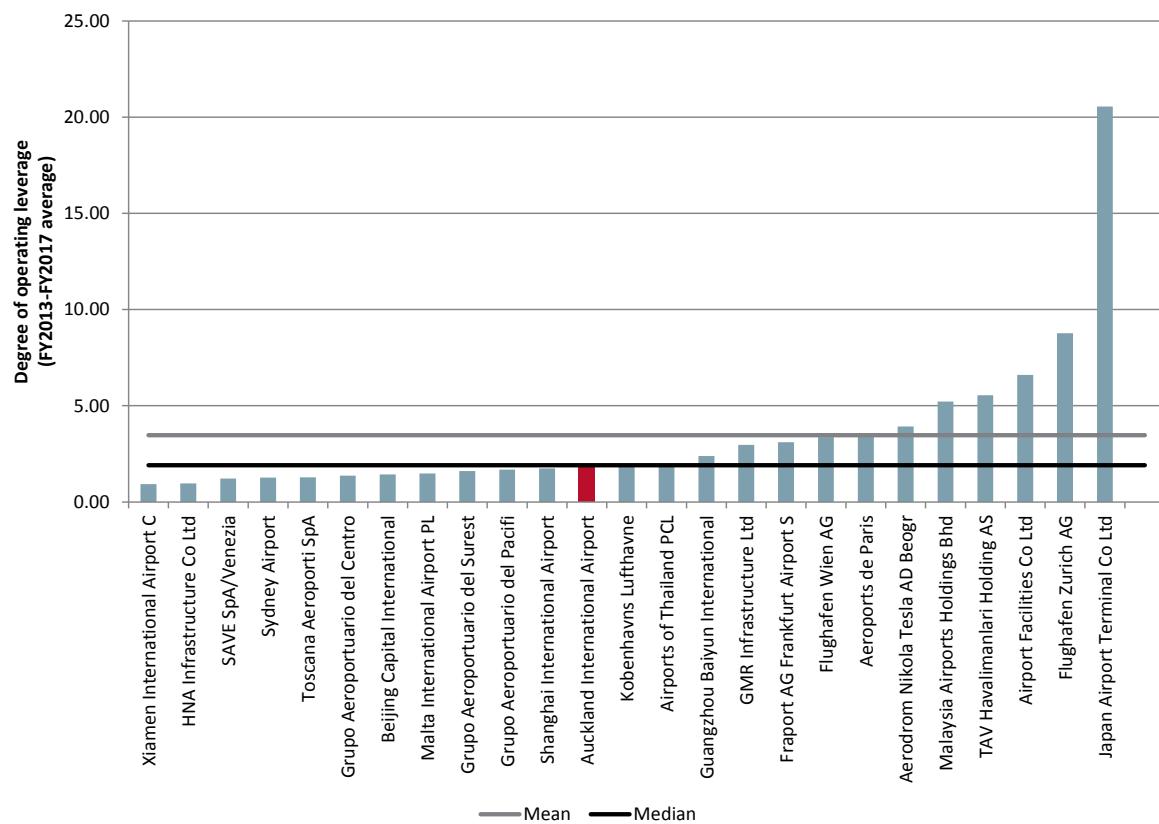
²³⁸ Lord noted that this is because "[m]any firms do not manufacture a single product, nor are figures on unit output available in standard accounting data". Richard Lord "The Impact of Operating and Financial Risk on Equity Risk" (1996) *Journal of Economics and Finance* vol. 20, no. 3, page 37, note 7.

²³⁹ 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.

²⁴⁰ Nancy Beneda "Estimating Cost of Capital Using Bottom-up Betas" (May 2003), page 3.

A57 Figure A3 below displays data on the degree of operating leverage, sourced from Bloomberg, for the companies in the asset beta comparator sample.²⁴¹ 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).

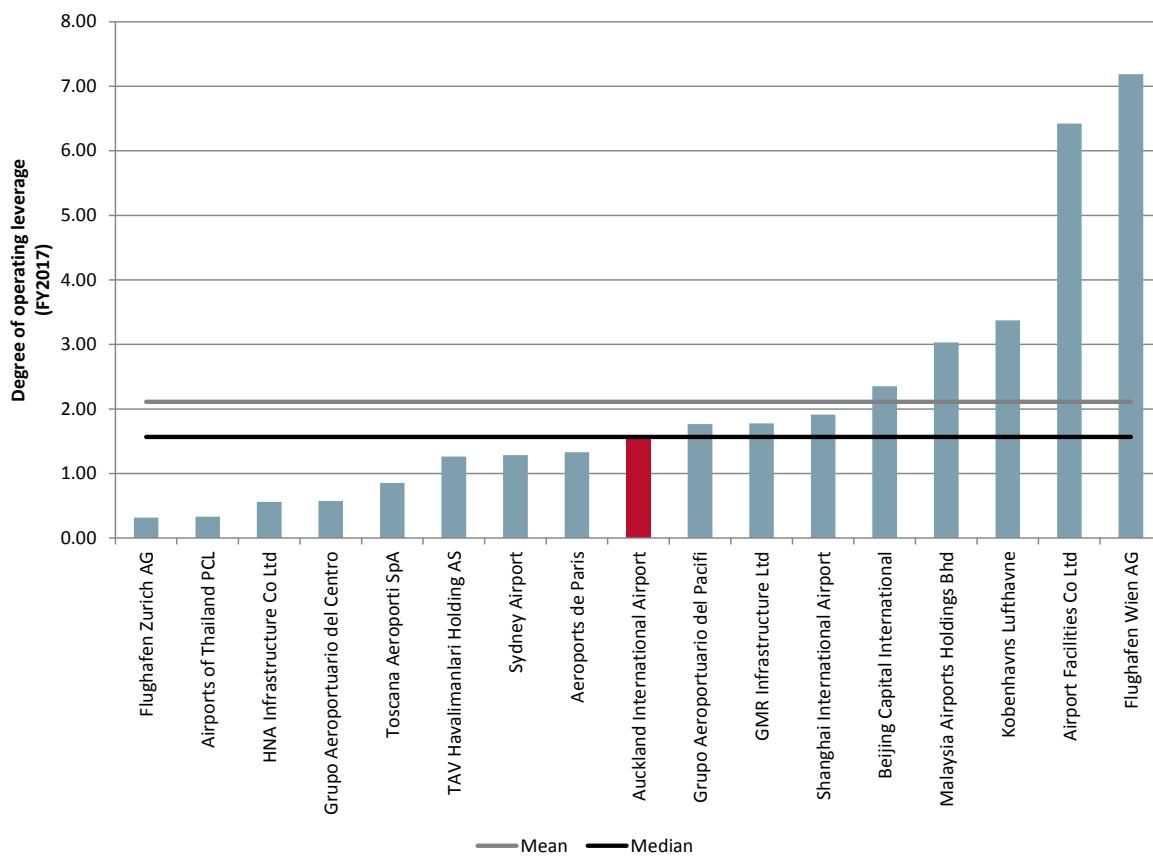
Figure A3 Degree of operating leverage for firms in the asset beta comparator sample (FY2013-FY2017 average)



²⁴¹ 25 of the 26 comparator companies are included. Shenzhen Airport Co Ltd is the only company that is excluded, data to lack of data.

- A58 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.²⁴²

Figure A4 Degree of operating leverage for firms in the asset beta comparator sample (FY2017)



- A59 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.
- A60 Although we consider the Bloomberg data provides a better measure of operating leverage than the capex-based proxies reported by NERA, we acknowledge it has some limitations. In particular:
- A60.1 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

²⁴² 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 writedowns of asset values); and

- A60.2 the underlying EBIT and revenue data is measured for the ‘whole of business’, rather than focussing on regulated aeronautical activities.
- A61 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.²⁴³ 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.
- A62 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.
- A63 Based on the analysis above, we disagree with NERA’s conclusion that Auckland Airport’s historical operating leverage is higher than the comparator sample. Rather, we consider that the evidence suggests Auckland Airport’s degree of historic and current operating leverage is below or, at best, similar to the average of the sample.
- A64 Although Auckland Airport’s degree of operating leverage is the median of the sample for both FY2017 and when averaging across FY2013-FY2017, it is below the mean in both cases. Using our adjusted measure of EBIT, Auckland Airport would be below the mean and median.

Will Auckland Airport have higher operating leverage due to its large capital expenditure in PSE3?

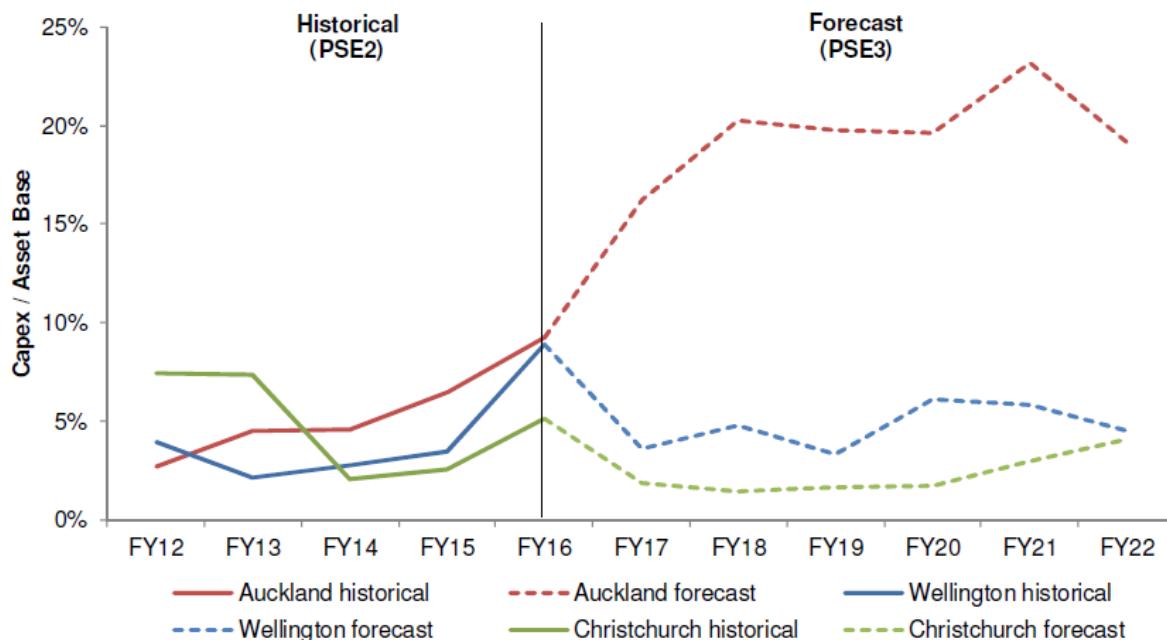
- A65 We agree that Auckland Airport’s operating leverage is likely to increase during PSE3, due to its large capital investment programme. However, it is not clear to us that Auckland Airport’s operating leverage over PSE3 will be materially higher than the average of the comparator sample, in a way that would meaningfully impact asset beta.
- A66 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:
 - A66.1 “[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

²⁴³ 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’.

expenditure programmes are typically difficult to scale back with changes in customer volumes”,²⁴⁴ and

- A66.2 “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”.
- A67 The increase in Auckland Airport’s forecast capex is shown in Figure A5 below, which is reproduced from NERA’s report.²⁴⁵

Figure A5 Auckland Airport’s capex forecast relative to Christchurch and Wellington Airports



- A68 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. 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”.²⁴⁶
- A69 As an approximation, 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 aeronautical pricing 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%).

²⁴⁴ 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.

²⁴⁵ 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.

²⁴⁶ Auckland Airport “Response to information request” (9 March 2018), page 1.

A70 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%

A71 Auckland Airport also provided data on alternative proxies which can be used to estimate the possible change in operating leverage over PSE3. However, the alternative proxies referred to by Auckland Airport do not appear to have the same level of support in the literature as the EBIT growth/revenue growth measure described in paragraphs A54 to A56 above.

A72 Auckland Airport noted that:²⁴⁷

The CMA [UK Competition and Markets Authority] considered a range of proxies for operating leverage, recognising that none are perfect:

- Operating cash flow (OCF) / revenue; (lower %, higher operating leverage)
- Total expenditure (TOTEX) / RAB; (higher %, higher operating leverage)
- Revenue / RAB; (higher %, higher operating leverage)

As already noted, the change in Auckland Airport's circumstances is driven by a structural change towards capex, rather than change in the composition of opex from variable to fixed costs. This change is captured by the TOTEX / RAB measure and, to a lesser extent, by OCF / revenue.

A73 Table A4 below shows the percentage change in these three measures for Auckland Airport from the PSE2 average to the forecast average for PSE3, and from FY2017 to the forecast average for PSE3. Although the operating cash flow/revenue and total expenditure/RAB measures indicate that Auckland Airport's operating leverage is

²⁴⁷ Auckland Airport "Response to information request" (9 March 2018), page 2.

expected to increase over PSE3, the revenue/RAB measure indicates that Auckland Airport's operating leverage is expected to decrease.²⁴⁸

Table A4 Alternative proxies for Auckland Airport's change in operating leverage

Measure	Impact on operating leverage	FY2017	PSE2 average	PSE3 average	% change from PSE2 to PSE3	% change from FY2017 to PSE3
Operating Cash Flow ²⁴⁹ / Revenue	Lower % = higher operating leverage	42%	41%	33%	-20%	-21%
TOTEX / Average RAB	Higher % = higher operating leverage	34%	21%	39%	87%	14%
Revenue / Average RAB	Higher % = higher operating leverage	28%	24%	21%	-13%	-27%

- A74 On balance, we consider that the available evidence suggests the likely increase in Auckland Airport's operating leverage will be relatively immaterial.
- A75 For example, if Auckland Airport's degree of operating leverage increased by 25%, this would be unlikely to make a significant difference to its position relative to the comparator companies (as shown in Figure A3 and Figure A4 above). In this case, Auckland Airport would still be approximately in the middle of the comparator sample.
- A76 Dr John Small (for BARNZ) questioned whether Auckland Airport could defer capex projects, delaying the impact on operating leverage. Specifically, he stated that the NERA report:²⁵⁰

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.

...

Even if this theory were correct (which is doubtful for the reasons discussed above), the

²⁴⁸ We note that Auckland Airport did not include the revenue/RAB measure when responding to our information request.

²⁴⁹ Auckland Airport calculated operating cash flow as regulatory profit/loss - proxy regulated gross interest expense before tax + depreciation – revaluations – gains on sale of assets + other.

²⁵⁰ Dr John Small "Response to NERA on WACC for AIAL" (13 April 2017), paragraph 3(a) and 17.

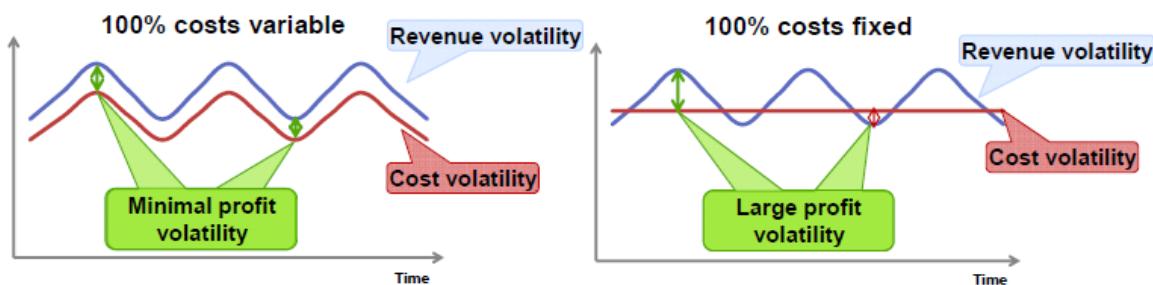
NERA approach assumes that [Auckland Airport] will be irrevocably committed to the proposed investment programme at the outset of PSE3, which is not correct.

- A77 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 is expected to increase in PSE3 due to its capital expenditure programme. However, based on the available evidence, we are not convinced that the increase in operating leverage will be significant enough to materially impact Auckland Airport's position relative to the comparator companies.

Is Auckland Airport's beta expected to increase due to operating leverage?

- A78 Auckland Airport states that its exposure to systematic risk will increase due to the increase in operating leverage resulting from its capital expenditure programme.
- A79 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".²⁵¹
- A80 Figure A6 below, replicated from NERA's report, shows this graphically using the extreme examples of 100% variable costs and 100% fixed costs.²⁵²

Figure A6 Impact of cost structure (fixed vs variable) on companies' profit margins



- A81 The link between the degree of operating leverage and beta is relatively well established in academic literature. For example:
- A81.1 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".²⁵³

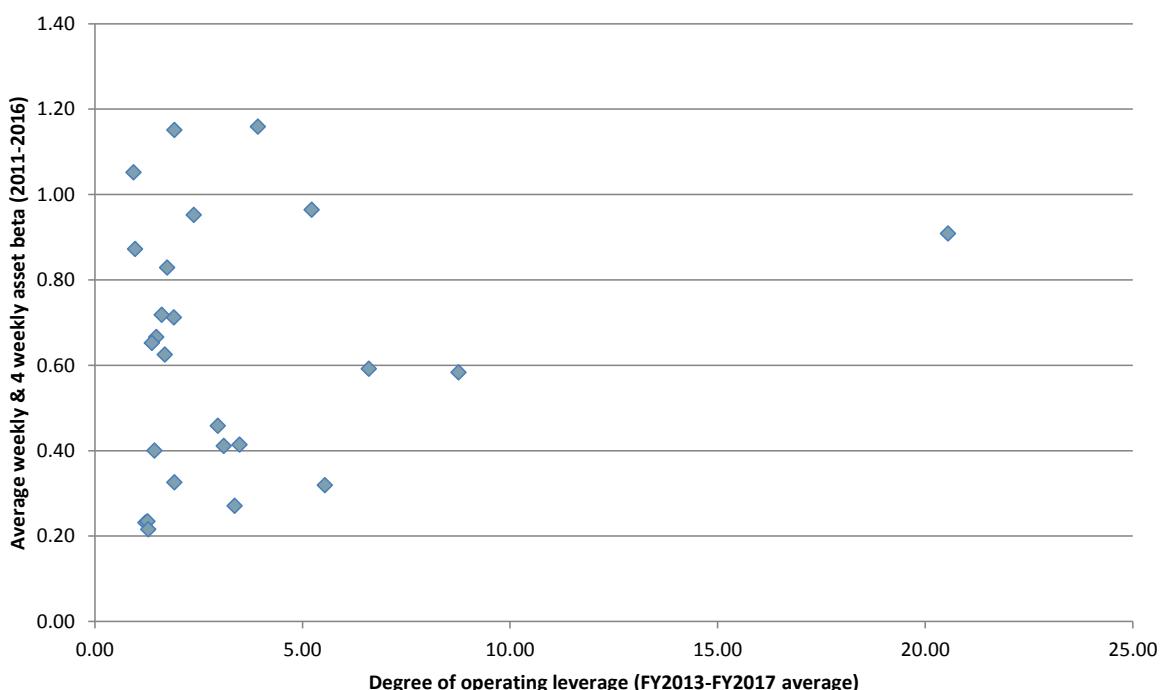
²⁵¹ NERA "A Peer Review of Auckland Airport's Approach to WACC and Target Return for Aeronautical Pricing: A Report for Auckland Airport" (23 March 2017), page 5.

²⁵² 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.

²⁵³ Brealey, Myers and Allen "Principles of corporate finance" (11th ed).

- A81.2 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”.²⁵⁴
- A82 However, the expected relationship between 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.²⁵⁵

Figure A7 Scatter plot of asset beta and degree of operating leverage for our comparator sample



A83 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 (capex per passenger and capex per percentage of turnover).²⁵⁶

A84 In response, NERA stated that “Small does not sufficiently adjust for differences between comparator airports to support his assertion, including regulatory regime

²⁵⁴ Aswath Damodaran “Damodaran on Valuation: Security Analysis for Investment and Corporate Finance” (2nd ed, 2011).

²⁵⁵ 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.

²⁵⁶ John Small “Response to NERA on WACC for AIAL” (13 April 2017), paragraphs 11-16.

and passenger mix, and his claimed negative relation is statistically insignificant".²⁵⁷ However, we note that the onus is on Auckland Airport (and NERA) to provide evidence to substantiate the relationship between operating leverage and beta, rather than simply rejecting Dr Small's observation.

- A85 Dr Lally has also previously discussed the relationship between operating leverage and 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":²⁵⁸

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.

- A86 We agree with Dr Lally that there likely to be a positive relationship between operating leverage and 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).
- A87 The key question is whether the expected increase in Auckland Airport's operating leverage is large enough to justify departing from our comparator sample-based estimate of 0.60, and if so by how much.
- A88 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

²⁵⁷ 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.

²⁵⁸ Martin Lally "The cost of capital for the airfield activities of New Zealand's international airports" (June 2001), page 372.

Chung (1989) estimate the relationship between degree of operating leverage and beta using regression analysis.²⁵⁹

- A89 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.
- A90 In addition, the approach to setting prices could potentially dampen the effect of operating leverage on 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.²⁶⁰ 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.
- A91 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 beta.
- A92 While Auckland Airport's operating leverage is likely to 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 consider that additional evidence is required to demonstrate whether 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.

Is focussing on Auckland Airport's observed beta appropriate?

- A93 We disagree with focussing solely on the observed asset beta for Auckland Airport when setting its target return.
- A94 Based on advice from NERA, Auckland Airport stated 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. 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.
- A95 Although Auckland Airport's actual beta is a useful reference point, we consider that beta estimates for a single company 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.

²⁵⁹ 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.

²⁶⁰ NERA "Relative Risk of London Heathrow – A Report for London Heathrow" (31 January 2013), page 41.

- A96 We also note that the observable beta for Auckland Airport reflects the entire business, not just the regulated aeronautical activities. The Major Electricity Users' Group (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”.²⁶¹
- A97 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.²⁶²
- A98 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 beta.²⁶³ Submissions during that process emphasised the importance of using a comparator sample when considering beta, rather than focussing on a single company. For example:
- A98.1 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”.²⁶⁴
 - A98.2 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”.²⁶⁵
 - A98.3 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”.²⁶⁶
- A99 Given our concerns with Auckland Airport's approach of focussing on estimates of its own asset beta, we consider little evidence has been presented to support the asset beta implicit in its target return. In other words, even if Auckland Airport's operating leverage was materially higher than the average of the comparator sample, we consider the implicit 0.08 asset beta adjustment has not been sufficiently justified based on the available evidence.

²⁶¹ MEUG “Cross-submission on airport price setting event PSE3” (26 January 2018), paragraph 7.

²⁶² 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.

²⁶³ Commerce Commission “Cost of capital for the UCLL and UBA pricing reviews: Final decision” (15 December 2015), paragraphs 141-144.

²⁶⁴ CEG “Review of Lally and Oxera reports on the cost of capital” (July 2014), paragraph 10.

²⁶⁵ 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.

²⁶⁶ 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.

How have other regulators addressed differences in operating leverage when considering asset beta for airports?

A100 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:

A100.1 a 2007 decision from the UK Competition Commission regarding differences in the relative asset betas of Heathrow and Gatwick airports;²⁶⁷ and

A100.2 a 2015 decision from the UK Competition and Markets Authority (CMA) regarding Bristol Water.²⁶⁸

A101 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's planned third runway.

A102 These examples are discussed in more detail below. We note that these examples generally resulted in smaller uplifts to the asset beta/cost of capital than Auckland Airport's implicit asset beta adjustment of 0.08 (which increases its cost of capital by 56 basis points).

A103 Operating leverage was one of three factors the UK Competition Commission considered when determining the relative asset betas for Heathrow and Gatwick. The others were demand risk and the riskiness of client airlines. The Competition Commission stated:²⁶⁹

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.

²⁶⁷ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 27.

²⁶⁸ 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.

²⁶⁹ 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.

- A104 The Competition Commission also noted that Heathrow has lower operating leverage than both Stansted and Gatwick, but did not explicitly mention this factor when reaching its conclusion in the quote above.²⁷⁰
- A105 Therefore, Heathrow was considered to be the lowest risk airport on all three measures. Despite this, the Competition Commission determined an asset beta for Heathrow that was only 0.05 lower than for Gatwick. This suggests that any adjustment associated with operational leverage alone was small.²⁷¹
- A106 NERA also noted that, in a 2015 price determination for Bristol Water, the UK CMA applied an uplift to asset beta due to operating leverage. This increased the mid-point of its range from 0.28 to 0.32.²⁷²
- A107 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.²⁷³ 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.²⁷⁴
- A108 Heathrow currently has another large capex programme planned – the development of a third runway.
- A109 The CAA is in the early stages of considering its approach to Heathrow’s next price control period (H7), which is due to begin on 1 January 2020. It commissioned PwC to provide an “early and preliminary” range for Heathrow’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”.²⁷⁵

²⁷⁰ 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).

²⁷¹ 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%.

²⁷² 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.

²⁷³ 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.

²⁷⁴ See Figure A1 above.

²⁷⁵ CAA “Economic regulation of capacity expansion at Heathrow: policy update and consultation – CAP 1610” (December 2017), paragraph 2.14.

- A110 PwC's report for the CAA notes that the directional impact of large capital programmes on systematic risk is conceptually unclear, and will depend on the nature and mix of the costs involved.²⁷⁶
- A111 Given the ambiguous impact from a conceptual perspective, PwC reviewed six case studies of other WACC adjustments intended to capture the additional risks during 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%.²⁷⁷
- A112 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.²⁷⁸
- A112.1 Cost overruns, where incurred efficiently – through factors outside of management control – are likely to be recoverable under the current capex incentive mechanisms in place. This protects Heathrow from some of the large down-side risks that are built into the top-end of the range.
 - A112.2 The benchmarks which are most comparable to Heathrow's third runway are at the low end of the range.
- A113 We consider that differences between the UK and New Zealand regulatory regimes further limit the relevance of PwC's findings to Auckland Airport. In particular, Auckland Airport is subject to information disclosure, but Heathrow is subject to price control regulation.
- A114 Significantly, Auckland Airport is able to include all its capital expenditure in the RAB (without being subject to binding reviews of efficiency or prudence of the spending), and flow this through to its prices.²⁷⁹ We consider that this significantly reduces Auckland Airport's exposure to risks of large capex projects.

²⁷⁶ PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017), paragraph 6.18.

²⁷⁷ PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017), page 9.

²⁷⁸ PwC "Estimating the cost of capital for H7 – A report prepared for the Civil Aviation Authority (CAA)" (November 2017), paragraph 6.83.

²⁷⁹ 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.

BARNZ's concerns regarding the implications of Auckland Airport's operating leverage rationale

A115 BARNZ submitted that airlines are very concerned about the implications of Auckland Airport's operating leverage analysis. It stated that:

- A115.1 The NERA analysis is a very troubling precedent to set in the New Zealand regulatory context – 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 capex forecast.
 - A115.2 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.
 - A115.3 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.
 - A115.4 BARNZ is concerned that 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.²⁸⁰
- A116 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 should be considered. We also note that:
- A116.1 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).²⁸¹ 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.
 - A116.2 We will consider Auckland Airport's WACC estimates for future price setting events on their merits, including the expected impact of operating leverage

²⁸⁰ 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'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'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.

²⁸¹ In addition, we use 67th percentile WACC estimates for price-quality path regulation of EDBs 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.

at that time. We have also considered consistency between Auckland and Christchurch Airport's approaches when forming our view on whether each airport's target return is justified, consistent with our framework for assessing target returns.

A117 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.

A117.1 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.²⁸²

A117.2 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 beta.²⁸³

Our draft conclusion regarding Auckland Airport's asset beta

A118 An adjustment to our asset beta estimate may, in principle, be justified if Auckland Airport can demonstrate that:

A118.1 its operating leverage is (or is expected to be) significantly higher than the companies in our comparator sample; and

A118.2 that difference is of a magnitude that can reasonably be expected to meaningfully impact beta.

A119 However, based on the evidence before us, we are not convinced that:

A119.1 Auckland Airport's expected operating leverage over PSE3 will be materially above the average operating leverage for the companies on our comparator sample; and

A119.2 even if it was, there is little evidence to support the magnitude of its implicit 0.08 adjustment to asset beta.

A120 Therefore, we consider that Auckland Airport's implicit adjustment to asset beta has not been sufficiently justified at this stage.

A121 We welcome additional evidence in submissions. We consider that the following evidence would provide useful information regarding the appropriateness of Auckland Airport's implicit adjustment to our asset beta estimate of 0.60.

²⁸² 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.

²⁸³ 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.

- A121.1 Empirical evidence showing whether Auckland Airport's operating leverage over PSE3 is expected to be materially higher than the average of the 26 airports in our asset beta comparator sample. We expect this would require comparing a more robust estimate of Auckland Airport's forecast operating leverage over PSE3 against comparable estimates of the degree of operating leverage for other companies in the comparator sample.
- A121.2 Views from independent parties, such as rating agencies or research brokers, indicating whether a forecast increase in operating leverage for other companies in analogous situations was expected to increase the regulated or corporate WACC.
- A121.3 Evidence relating to whether other regulatory agencies have made asset beta adjustments due to operating leverage of a similar magnitude to that of Auckland Airport.

We disagree with Auckland Airport's view that a TAMRP of 7.25% is appropriate

- A122 Auckland Airport also stated that it considers a market risk premium of 7.25% (rather than our estimate of 7.00%) 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.
- A123 However, Auckland Airport subsequently noted that it used our TAMRP of 7.00% when undertaking its cross-checks using our WACC methodology.²⁸⁴ As noted above, it only adjusted the asset beta and cost of debt when undertaking these cross-checks.
- A124 We continue to consider that a TAMRP of 7.0% is appropriate. The TAMRP is a market-wide parameter, so we apply a TAMRP of 7.0% 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.²⁸⁵

Our assessment of Auckland Airport's approach to the cost of debt

- A125 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

- A126 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

²⁸⁴ 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.

²⁸⁵ Commerce Commission "Input methodologies review decisions – Topic paper 4: Cost of capital issues" (20 December 2016), paragraphs 490-533.

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.²⁸⁶

A127 Auckland Airport noted that:

- A127.1 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);
- A127.2 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%;
- A127.3 as it continues to raise further debt to partially fund the 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
- A127.4 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

- A128 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 benchmark WACC for assessing Auckland Airport's profitability.
- A129 Our methodology for estimating the cost of debt (as specified in the IMs) differs significantly from Auckland Airport's approach. In particular:
 - A129.1 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
 - A129.2 Auckland Airport's forecast cost of 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).
- A130 We have not reviewed Auckland Airport's estimate of the cost of debt in detail.²⁸⁷ 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

²⁸⁶ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 28.

²⁸⁷ Auckland Airport's pricing disclosure contains limited details regarding the specific inputs to its forecast cost of debt.

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%.²⁸⁸ This difference in cost of debt estimates affects the overall WACC by just two basis points.

- A131 We note that Auckland Airport increased its cost of debt estimate between its draft and final pricing decisions, based on advice from NERA.²⁸⁹ 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%.
- A132 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 2022). This is compared to Auckland Airport’s forecast of 3.99% in the last round of its bond refinancing in 2021.²⁹⁰
- A133 However, we consider that the 20 basis point increase recommended by NERA may not be fully justified for the following reasons.
 - A133.1 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.²⁹¹
 - A133.2 Auckland Airport is able to use interest rate swaps to broadly match the risk-free rate for the five-year pricing period.²⁹²
 - A133.3 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.²⁹³ 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.
- A134 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:

²⁸⁸ Auckland Airport “Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 28.

²⁸⁹ 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.

²⁹⁰ 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.

²⁹¹ Auckland Airport “Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 29.

²⁹² Commerce Commission “Input methodologies review decisions – Topic paper 4: Cost of capital issues” (20 December 2016), paragraphs 87-88.

²⁹³ 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.

- A134.1 our concern that the 20 basis point increase between Auckland Airport's draft and final pricing decisions may not be fully justified;
- A134.2 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
- A134.3 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).

Our assessment of Auckland Airport's overall target return

A135 This section discusses:

- A135.1 whether Auckland Airport's target return is in the long-term benefit of consumers;
- A135.2 whether there are any additional factors relevant to the Auckland Airport's overall target return; and
- A135.3 our overall view regarding Auckland Airport's target return.

Is Auckland Airport's target return in the long-term benefit of consumers?

A136 In its pricing disclosure, Auckland Airport stated that:²⁹⁴

- A136.1 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;
- A136.2 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;
- A136.3 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

²⁹⁴ 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.

A136.4 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.

A137 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 is “pushing the boundaries” of what is acceptable in terms of target return.²⁹⁵

A137.1 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.

A137.2 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 capex 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.

A137.3 Auckland Airport’s target WACC percentile (65th for priced services only, 67th when aircraft and freight included) is very similar to the pricing WACC percentile (67th) for energy companies, which have no dual till.

A138 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 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).

A139 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.²⁹⁶

A139.1 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 above Deutsche Bank’s estimate for the regulated segment of Auckland Airport’s business (6.17%) and the post-tax WACC of 6.28% that

²⁹⁵ BARNZ “Review of Auckland and Christchurch Airport’s third price setting events – Process & Issues paper” (28 November 2017), page 11.

²⁹⁶ Commerce Commission “Input methodologies review decisions – Topic paper 4: Cost of capital issues” (20 December 2016), paragraph 708.

Dunedin International Airport used for its 2014 disclosure year, 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%), but below PwC's estimate for Queenstown Airport's aeronautical business of 6.86%, and below PwC's estimate for Auckland Airport's entire business (including unregulated activities) of 6.99%;²⁹⁷ and

- A139.2 within the range of recent overseas regulatory WACC decisions for airports (after normalising for differences in risk-free rates), made by the CAA in the UK (6.11% for Heathrow and 6.42% for Gatwick) and 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?

- A140 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 other regulated airports when assessing whether an adjustment (either upwards or downwards) may be appropriate for their target return.
- A141 BARNZ indicated the proportion of leisure-based travel may affect Auckland Airport's target return given Christchurch Airport's approach to its target return (see footnote 280). There is insufficient evidence currently before us to demonstrate that this should significantly impact Auckland Airport's target return.
- A142 Financeability concerns have also been raised as a possible reason for targeting a higher return. Auckland Airport stated in its pricing disclosure that:²⁹⁸

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.

- A143 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.²⁹⁹
- A144 NERA noted that Auckland Airport forecasts the funds from operation (FFO) to debt ratio 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

²⁹⁷ 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.

²⁹⁸ Auckland Airport "Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 14.

²⁹⁹ 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.

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.³⁰⁰

A145 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”.³⁰¹

A146 In addition:

A146.1 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)”;³⁰² and

A146.2 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”.³⁰³

Our draft conclusion regarding Auckland Airport's target return

A147 Based on the evidence before us, we consider that Auckland Airport's target return of 6.99% has not been sufficiently justified.

A148 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 support the magnitude of Auckland Airport's asset beta estimate. 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. Therefore, the implicit adjustment it has made to our asset beta estimate of 0.60 has not been sufficiently justified.

A149 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 – may not be 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).

³⁰⁰ 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.

³⁰¹ Auckland Airport “Price Setting Disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 14.

³⁰² John Small “Response to NERA on WACC for AIAL (13 April 2017), paragraph 32.

³⁰³ Macquarie Research “Auckland International Airport – A story of three halves” (October 2017), page 14.

Attachment B Our assessment of forecasts affecting Auckland Airport's returns

Purpose

- B1 This attachment contains our analysis and draft conclusions regarding 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 whether Auckland Airport is limited in its ability to extract excessive profits over the PSE3 period (section 52A(1)(d) of the Act), which is discussed in **Chapter 2**.
- B3 Consistent with section 52A(1)(b) of the Act, our assessment of operating efficiency also considers whether Auckland Airport has incentives to improve its operating efficiency and provide services at a quality that reflects consumer demands.

Draft Conclusions

- B4 Overall, we consider that Auckland Airport's opening and closing (forecast) investment values, forecast demand, and forecast operating expenditure do not raise the 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.³⁰⁴ 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

³⁰⁴ 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.³⁰⁵
- 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 opex 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, opex per passenger is lower than over the whole PSE2;
 - B7.2 Auckland Airport's historical opex performance indicates pressure on quality of services may continue in PSE3, however there does not currently appear to be cause for concern regarding quality over the long-term (this is also discussed in **Chapter 3 – Capital expenditure**); and
 - B7.3 Auckland Airport's historical opex 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 additional revenue (today's dollars) above our benchmark (our mid-point WACC estimate) from its second runway assets. This arises from 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. 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:

³⁰⁵ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 17.

- B8.1 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;
 - B8.2 Auckland Airport is proposing to treat revenues from the RLC as an offset against the carrying value of the assets being held for future development of the runway;
 - B8.3 the investment in the second runway will have been confirmed by Auckland Airport and significant development work undertaken before the charge is levied;
 - B8.4 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; and
 - B8.5 the RLC equates to only 3% of Auckland Airport's forecast total regulated revenue requirement for PSE3.
- B9 We consider the airport could have alleviated residual concerns about the potential for excessive profits in the event the project was abandoned by making a clear commitment to introduce a mechanism (eg, a refund) to deal with any RLC revenues collected in these circumstances. But we consider the absence of such a commitment should be of minimal concern given stakeholders appear to agree that the second runway will ultimately be required at some stage.
- B10 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**).
- B11 This draft 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

- B12 This attachment discusses our approach to analysis and preliminary 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:
- B12.1 Auckland Airport's opening and closing investment values, including the reasonableness of the airport's disclosed asset values and carry forward adjustments;
 - B12.2 its demand forecasts;
 - B12.3 its operating expenditure forecasts; and

B12.4 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

- B13 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.
- B14 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.
 - B14.1 The IM-compliant closing RAB from the ex-post disclosure of the year preceding the start of the current price setting event.³⁰⁶
 - B14.2 Any adjustments reflecting decisions made in previous price setting periods that have an impact on charges for the current pricing period. Auckland Airport has included a negative and positive carry forward adjustment, which are discussed below. Inclusion of these adjustments helps achieves consistency between the opening investment value and the forecast cash flows that are used in a forward-looking IRR calculation.
- B15 In a forward-looking IRR calculation, the forecast closing investment value reflects the remaining capital to be recovered. It comprises of two parts.
 - B15.1 The forecast closing asset base used by airports when setting prices, reflecting an airport's assumed time profile of capital recovery; and
 - B15.2 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.
- B16 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.³⁰⁷

³⁰⁶ 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.

³⁰⁷ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), pages 44–47.

Asset values

- B17 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 aeronautical pricing assets

- B18 Auckland Airport is applying a revaluation moratorium on its aeronautical pricing 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 aeronautical pricing services.
- B19 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

- B20 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.³⁰⁸
- B21 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 B19.

Auckland Airport has valued its aeronautical pricing assets consistent with our IM and ID Determinations

- B22 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 aeronautical pricing assets.
- B23 Auckland Airport has disclosed its aeronautical pricing assets by:³⁰⁹
- B23.1 restating the asset values provided most recently for information disclosure purposes (FY2016);
 - B23.2 removing all revaluations made since 2010 when the information disclosure regime began; and

³⁰⁸ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 208.

³⁰⁹ 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.

- B23.3 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).
- B24 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:³¹⁰
 - B24.1 allows airports to elect an approach to revaluing assets (ie, indexation or non-indexation) only at the beginning of a pricing period;
 - B24.2 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;
 - B24.3 requires airports to use the revaluation approach it used for price setting purposes in its ex-post disclosures; and
 - B24.4 allows airports to apply either indexation or non-indexation to parts of the asset base separately.

Other regulated assets

- B25 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.
- B26 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.
- B27 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

- B28 Auckland Airport submitted that allowing it to reflect its revaluation moratorium in its disclosed asset values eliminated the previous mismatch between 'aeronautical pricing' and 'other regulated' asset values.³¹¹
- B29 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

³¹⁰ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), pages 60–61.

³¹¹ 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.³¹²

Draft conclusion

- B30 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.
- B31 By reconciling its historic disclosed indexed asset values with the un-indexed values (revaluation moratorium) for each individual pricing asset, Auckland Airport's disclosures:
 - B31.1 help ensure that our forward-looking and backward-looking profitability assessments are consistent; and
 - B31.2 provide enough transparency for us and interested persons to assess whether Auckland Airport is limited in its ability to earn excessive profits.
- B32 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.³¹³
- B33 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

- B34 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.
- B35 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).
- B36 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

- B37 Auckland Airport has adjusted its opening asset valuation through a carry forward adjustment made up of:

³¹² BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 12.

³¹³ 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.

- B37.1 a positive adjustment relating to the recovery of revenue for the Pier B development that was deferred from previous pricing periods (Pier B adjustment);³¹⁴ and
- B37.2 a negative adjustment to account for the revaluation moratorium described above, providing for aeronautical pricing assets over the PSE3 period to reflect valuations in 2006 (“revaluation moratorium adjustment”).
- B38 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).³¹⁵
- B39 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.
- B40 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

- B41 Auckland Airport states that no customers opposed the two carry forward adjustments described.³¹⁶ Consistent with this, BARNZ notes that it is comfortable with the Pier B adjustment and the revaluation moratorium adjustment.³¹⁷
- B42 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).³¹⁸
- B43 There have been no additional concerns raised about the Pier B adjustment or the revaluation moratorium adjustment during the submission process to date.

³¹⁴ 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.

³¹⁵ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 20.

³¹⁶ 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.

³¹⁷ BARNZ “Review of Auckland and Christchurch Airport’s third price setting events – Process & Issues paper” (28 November 2017), page 9.

³¹⁸ 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.

Draft conclusion

- B44 The revaluation moratorium adjustment (and Auckland Airport's disclosure of it) is consistent with IM and ID Determinations. This adjustment:
- B44.1 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
 - B44.2 allows the opening and closing investment values to better reflect present value of the expected remaining cash flows from the assets.
- B45 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.
- B46 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 to forecasts. Note that further consideration of potential use of risk allocation adjustments is included in **Chapter 3** (Capital expenditure).
- B47 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

- B48 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

- B49 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:
- B49.1 annual and busy hour forecasts of international and domestic passenger arrivals and departures;
 - B49.2 international transit and transfer passengers (as applicable); and
 - B49.3 aircraft runway movements by busy hour, busy day and financial year, expressed in total maximum certified take-off weight (MCTOW) and number of aircraft.

- B50 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

- B51 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

- B52 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.
- B53 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.
- B54 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)".³¹⁹ 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",³²⁰ 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."³²¹
- B55 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

- B56 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

³¹⁹ 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.

³²⁰ 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.

³²¹ 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 FY22.³²²

- B57 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).³²³ 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.³²⁴
- B58 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.³²⁵

Airlines have not raised material concerns with Auckland Airport’s demand forecasts

- B59 Overall, airlines have not raised material concerns with Auckland Airport’s demand forecasts or suggested alternative forecast assumptions.
- B60 Auckland Airport notes that during its consultation with airlines, PSE3 demand forecasts were not a significant area of debate.³²⁶
- B61 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.³²⁷
- B62 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

³²² 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.

³²³ 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.

³²⁴ 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.

³²⁵ 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.

³²⁶ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 90.

³²⁷ 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.³²⁸

- B63 In its cross-submission, 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

- B64 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.³²⁹
- B65 Auckland Airport did not support Air New Zealand's risk sharing proposal.³³⁰
- B66 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

- B67 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)."³³¹ 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.
- B68 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.
- B69 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

³²⁸ 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.

³²⁹ 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.

³³⁰ 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.

³³¹ 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.³³² Route development costs are discussed in more detail in the next section: operating expenditure forecasts.

Our response

- B70 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.
- B71 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.³³³ Auckland Airport has also forecast to maintain these additional passenger numbers into PSE3.
- B72 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.

Draft conclusion on the reasonableness of the demand forecasts

- B73 Based on submissions, we consider that Auckland Airport's overall demand forecast for PSE3 is unlikely to result in excessive profits.
- B74 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.
- B75 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

- B76 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

³³² 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.

³³³ 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.³³⁴ Of particular note:

- B76.1 11 new airlines have commenced at Auckland Airport between 2015 and June 2017,³³⁵ and
- B76.2 2016 and 2017 experienced passenger growth of 8.6% and 11.3% respectively.
- B77 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.
- B78 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.”³³⁶

Demand growth projected over PSE3

- B79 Auckland Airport is projecting average annual growth of 4.2% for international passengers and 3.2% for domestic passengers over the PSE3 period.³³⁷ 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.
- B80 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.³³⁸ 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.
- B81 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.³³⁹
- B82 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

³³⁴ Auckland Airport “Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017”, page 29.

³³⁵ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 89.

³³⁶ 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.

³³⁷ 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.

³³⁸ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 89.

³³⁹ 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.³⁴⁰ 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.

- B83 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.³⁴¹

Operating expenditure forecasts

- B84 This section considers whether Auckland Airport’s operating expenditure (opex) 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.
- B85 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

- B86 Auckland Airport’s opex 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:
- B86.1 achieving efficiency gains: reducing opex while maintaining (or increasing) the quality and quantity of service provided or increasing the quantity or quality of service while maintaining the opex; and
 - B86.2 forecasting opex above an efficient level so as to earn higher profits by outperforming opex forecast without necessarily being efficient.

³⁴⁰ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 90.

³⁴¹ 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>.

- B87 Auckland Airport may also be less incentivised to achieve efficiency gains in the last year of the pricing period. This results in a higher starting point from which to forecast opex for the following pricing period.
- B88 Over time, the public disclosure of information on historic and forecast opex provides transparency about whether Auckland Airport has over- forecast opex 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

- B89 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 opex.
- B90 Auckland Airport states that its opex 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:
 - B90.1 the complexity created during brownfields developments and periods of high construction; and
 - B90.2 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).³⁴²
- B91 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.³⁴³

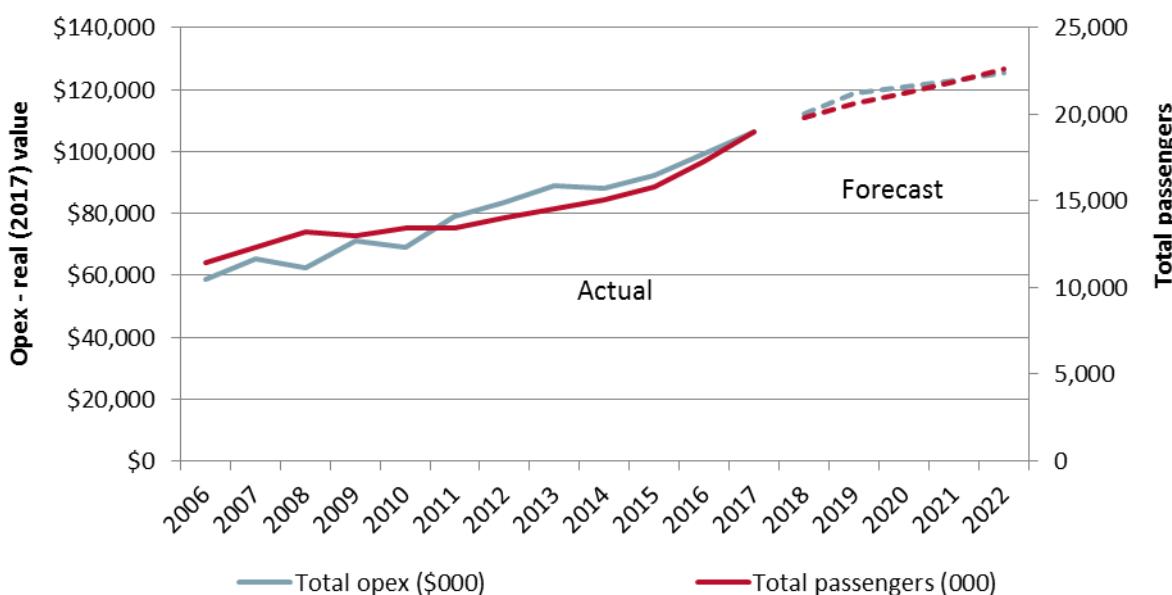
³⁴² Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), pages 37-38.

³⁴³ 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 opex against forecast trends in demand

B92 Figure B1 below shows that real opex and demand are both forecast to increase over PSE3.

Figure B1 Opex and demand growth (2006 – 2022)



Forecast trends in unit opex

B93 In its cross-submission, Auckland Airport stated that forecast opex per passenger over the PSE3 period is effectively flat in real terms, relative to its FY2017 forecast.³⁴⁴ 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.³⁴⁵

³⁴⁴ 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.

³⁴⁵ BARNZ “BARNZ assessment of AIAL’s PSE3 pricing decision against Part 4 criteria” (28 November 2017), page 15.

B94 The forecast trend in unit opex at Auckland Airport, relative to actuals for PSE1 and PSE2, are shown below in Figures B2 and B3 below.³⁴⁶ We consider opex per passenger and opex per aircraft are appropriate measures of Auckland Airport's unit opex as they are likely to reflect some of the drivers of Auckland Airport's variable costs.³⁴⁷

Figure B2 Opex per passenger (2006 – 2022)

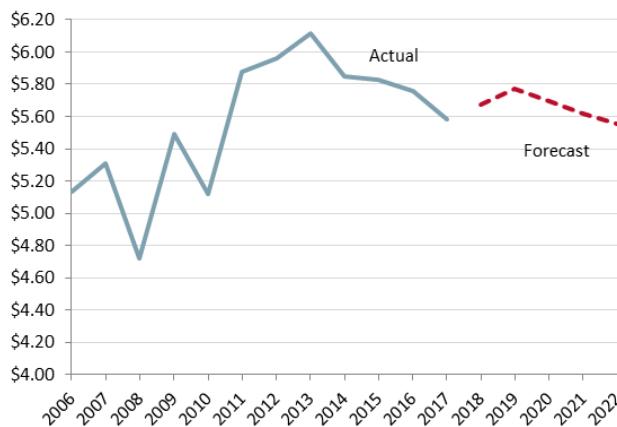
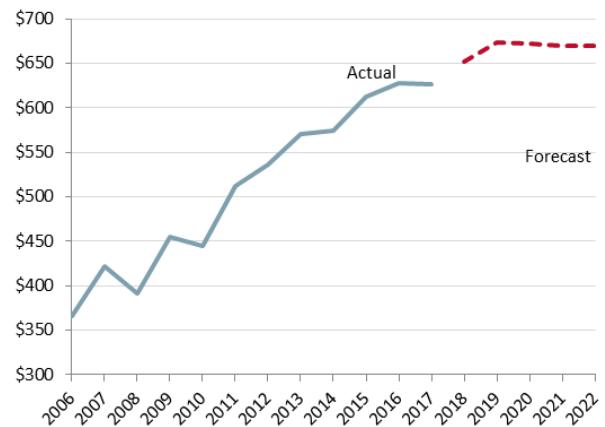


Figure B3 Opex per aircraft movement (2006 – 2022)



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

Opex per passenger

- B95 Figure B2 shows that over PSE3, Auckland Airport's real opex 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).³⁴⁸ As shown in Figure B1, real opex and passengers are both forecast to increase year-on-year over PSE3. Initially, real opex is expected to increase by more than forecast passenger growth.
- B96 By 2020, real opex and passenger numbers are forecast to rise, but at a decreasing rate and real opex per passenger declines because the reduction in real opex growth is greater than the reduction in passenger growth.
- B97 Over the whole PSE3 period, real opex per passenger is forecast to be \$5.66. This compares to \$5.81 over the 2013-2017 (PSE2) period.

³⁴⁶ Based on information provided by Auckland Airport, we have assumed in our analysis of demand forecasts and opex 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.

³⁴⁷ Changes in opex per aircraft movement may reflect changes in the size and capacity of aircraft.

³⁴⁸ Our analysis uses actual 2017 opex. There is an insignificant difference between actual 2017 opex and Auckland Airport's estimate of 2017 opex at the time it set prices for PSE3 (\$106.2m compared to \$106.5m respectively).

Opex per aircraft movement

- B98 Figure B3 shows that real opex per aircraft movement is also forecast to marginally increase over 2018-2019 and then gradually decline, so that by 2022 it is slightly above 2017 levels (\$669.86 compared to \$625.97).
- B99 Over the whole PSE3 period, real opex per aircraft movement is forecast to be \$667.43. This compares to \$602.92 over the 2013-2017 (PSE2) period.

Comment on forecast unit opex

- B100 Overall, Auckland Airport's opex forecast for PSE3 does not appear unreasonable relative to historic levels. While PSE3 opex per aircraft movement rises above PSE2, this is also driven by changes in aircraft size and capacity. The forecast opex per passenger end-point is not significantly different than that in PSE2, and over the whole PSE3, opex per passenger is lower than over the whole PSE2.
- B101 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 opex forecast is inefficiently high

- B102 BARNZ stated that Auckland Airport's current operating expenditure is inefficiently high, and that this means the starting point for the PSE3 opex forecast is also inefficiently high (supported by Air New Zealand).³⁴⁹ Related concerns about actual and forecast opex outpacing CPI and inefficient expenditure were also raised. Specifically:

- B102.1 BARNZ noted that over the FY2006-FY2022 period, the airport's opex per passenger has increased/is forecast to increase by an average of 0.5% per year above CPI.³⁵⁰ Similarly, Air New Zealand noted that opex 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.³⁵¹
- B102.2 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."³⁵²

³⁴⁹ 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.

³⁵⁰ BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), page 13.

³⁵¹ 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.

³⁵² BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 18.

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.³⁵³

B102.3 Qantas stated that:³⁵⁴

[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

B103 As discussed, Auckland Airport's opex forecast for PSE3 does not appear unreasonable relative to historic levels. In particular:

- B103.1 the forecast opex per passenger end-point is not significantly different than that over PSE2;
- B103.2 the forecast opex per passenger over the whole PSE3 is marginally lower than over the whole PSE2; and
- B103.3 the projected growth in real opex is more than offset by forecast passenger growth from 2020 onwards.

B104 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:

- B104.1 how Auckland Airport's actual opex compares to its opex forecasts over PSE1 and PSE2, and the reasons for any over or under performance; and
- B104.2 how Auckland Airport's opex compares to other airports.

How Auckland Airport's historical opex compares to its opex forecasts

Historic trends in unit opex

B105 Auckland Airport had forecast unit opex 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."³⁵⁵

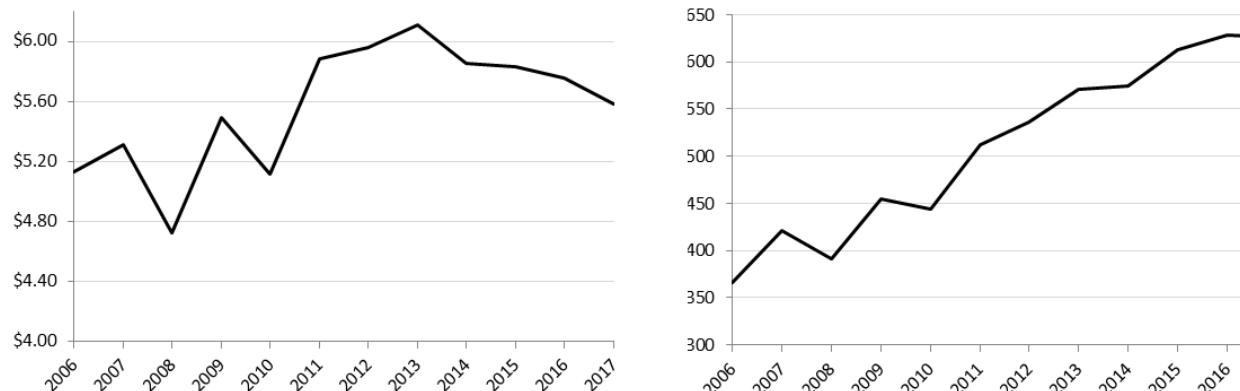
³⁵³ Air New Zealand "Submission on process and issues paper on the review of Auckland and Christchurch Airports third prices setting for airport services" (28 November 2017), paragraph 36.

³⁵⁴ 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.

³⁵⁵ 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.

B106 Figure B4 and Figure B5 below show that unit opex at Auckland Airport has varied over PSE1 (2007-12) but has trended upwards until the start of PSE2 (2013), where opex 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 Opex per passenger (2006 - 17) **Figure B5 Opex 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.

Comparison between actual and forecast opex

B107 Actual opex 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 opex per passenger (2013 – 17)

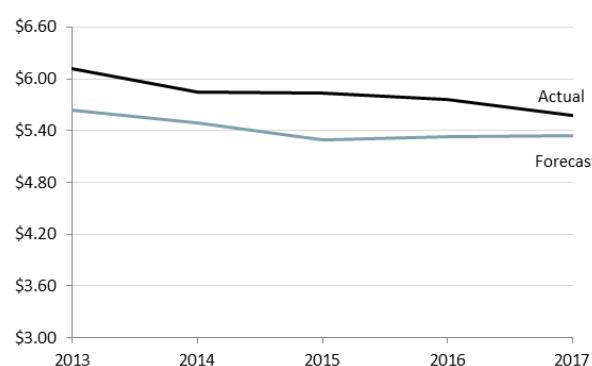
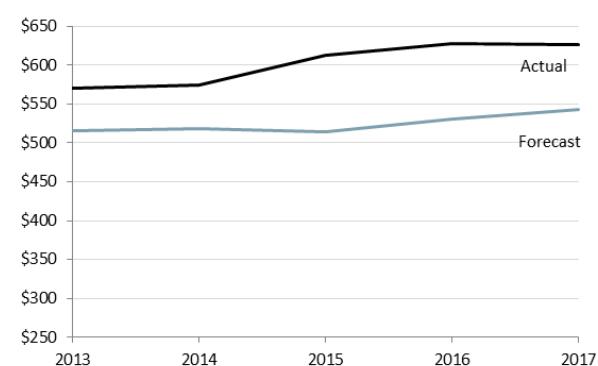


Figure B7 Forecast and actual opex per aircraft movement (2013 – 17)



Notes: we have not included PSE1 for comparison purposes because PSE1 forecast opex excluded aircraft and freight costs and leased areas.³⁵⁶ Dollars shown are in real (2017) value.

³⁵⁶ Comparisons between forecast and actual opex 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.

B108 Auckland Airport has attributed the majority of this additional expenditure to:

- B108.1 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.
 - B108.2 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.³⁵⁷
 - B108.3 Other costs associated with asset maintenance including repairs and maintenance, and consultancy, audit and legal costs.
- B109 The drivers of the PSE2 opex variance are similar to the drivers of opex variance over PSE1 where actual opex exceeded forecasts by 13.4%³⁵⁸ and Auckland Airport attributed over half of this variance to route development costs.³⁵⁹ We noted in our section 56G review that unit opex 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.³⁶⁰
- B110 This differs somewhat to the opex trend over PSE2 - unit opex exceeded the forecast (even after excluding the higher marketing, promotions and public relations expenditure), while declining over the period.

How Auckland Airport's opex compares to other airports

- B111 Airlines' submissions have not suggested an alternative PSE3 forecast for total opex or particular operating expenditure items. Rather, airlines have queried whether differences between Auckland Airport's opex and that of other airports are reasonable.

³⁵⁷ Auckland Airport "Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017", page 30.

³⁵⁸ The PSE1 opex 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 opex over PSE2, which did include these costs in the forecast.

³⁵⁹ 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.

³⁶⁰ 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.

- B112 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.³⁶¹

Airlines' views on how Auckland Airport's opex compares to other airports

- B113 BARNZ considers that compared to other New Zealand airports, Auckland Airport has high opex per passenger, high corporate opex per passenger and high maintenance opex as a proportion of RAB value.³⁶²

- B114 BARNZ provides several observations comparing Auckland Airport's operating expenditure to that of other NZ airports:

- B114.1 Auckland Airport's opex per passenger is higher than Queenstown and around double that of Wellington Airport. While it is below Christchurch Airport, Christchurch Airport has forecast its opex 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.³⁶³
- B114.2 Auckland Airport's asset maintenance opex 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.
- B114.3 Auckland Airport's corporate overheads operating expenditure per passenger is higher than at Christchurch Airport and more than double that at Wellington Airport.
- B114.4 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.³⁶⁴
- B114.5 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 opex, which could

³⁶¹ 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.

³⁶² BARNZ "Review of Auckland and Christchurch Airport's third price setting events – Process & Issues paper" (28 November 2017), table 2 row 7, page 13.

³⁶³ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 13.

³⁶⁴ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 13.

reflect the older nature of the buildings and/or additional cost associated with expansion.³⁶⁵

B114.6 Auckland Airport has substantially higher remuneration and benefits costs per FTE than Wellington and Christchurch Airport. It is not clear if this is due to higher salaries being paid at Auckland Airport including additional costs within this disclosed item.³⁶⁶

B115 BARNZ also notes that opex per passenger in Australian airports appear to have been growing significantly. However, BARNZ considers that the reasons given for growing opex inefficiency in Australian airports differ from the reasons given for opex inefficiency in New Zealand airports.³⁶⁷

Auckland Airport's view on how its opex compares to other airports

B116 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:

- B116.1 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;
- B116.2 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
- B116.3 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 opex 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).³⁶⁸

B117 In response to points raised by BARNZ, Auckland Airport has said that:

- B117.1 "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

³⁶⁵ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 14.

³⁶⁶ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 14.

³⁶⁷ BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), pages 17–18.

³⁶⁸ 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.

that our operating costs are efficient and benchmark well by international standards..."³⁶⁹

B117.2 "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."³⁷⁰

Draft conclusion

Auckland Airport's PSE3 opex forecast does not appear unreasonable relative to historic levels

B118 As noted above:

- B118.1 the forecast opex per passenger end-point is not significantly different than that in PSE2;
- B118.2 over the whole PSE3, opex per passenger is lower than over the whole PSE2; and
- B118.3 the projected growth in real opex is more than offset by forecast passenger growth from 2020 onwards.

Auckland Airport's historical opex performance indicates pressure on quality of services may continue in PSE3

B119 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:

- B119.1 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.³⁷¹
- B119.2 BARNZ noting that while Auckland Airport's opex per passenger decreased over PSE2, quality of service problems have increased and it may be that

³⁶⁹ 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.

³⁷⁰ 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.

³⁷¹ Auckland Airport "Annual Information Disclosure – Regulatory Performance Summary for the year ended 30 June 2017", page 28.

increasing congestion has meant the airport could not spend enough to maintain service quality for the increased passenger volumes.³⁷²

- B120 As noted in **Chapter 3**, we consider there does not appear cause for significant concern around long-term quality at Auckland Airport given that:
- B120.1 Auckland Airport's customer survey results are still reasonable and largely consistent with other airports;
 - B120.2 it appears that Auckland Airport's investment programme will address a number of quality concerns in the longer term; and
 - B120.3 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 opex performance provides context for its PSE3 forecast but does not necessarily indicate the starting point for the PSE3 forecast is unreasonable*
- B121 Overall, Auckland Airport's historical unit opex performance, relative to forecasts does not show clear signs of improvements in opex efficiency. On the other hand, it is not clear that opex inefficiencies are arising either.
- B122 As noted by BARNZ, certain measures of Auckland Airport's opex 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 opex performance.
- B123 While the variance between actual and forecast opex 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:
- B123.1 Higher corporate overheads were the main source of variance between actual opex and forecast opex 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.
 - B123.2 The apparent inclusion of more 'speculative' route development costs (and associated demand) should encourage less variation between forecast and actual opex in future (particularly in corporate overheads). This may improve transparency about whether Auckland Airport has over- forecast opex for the purpose of price setting and its performance relative to other suppliers.

³⁷² BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 15.

- B123.3 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.
- B123.4 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 opex forecast on our assessment of expected profitability

- B124 We have tested the impact of a change in Auckland Airport's operating expenditure forecasts on its expected profitability.

- B124.1 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.
- B124.2 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

- B125 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.
- B126 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:
 - B126.1 we expect Auckland Airport to begin realising some of this additional revenue (\$8m in today's dollars) upon introducing its RLC, given the RLC is intended to recover the forecast holding costs on land being held for the second runway;
 - B126.2 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
 - B126.3 no other aspects of the RLC – as proposed by Auckland Airport – raise due concern that the airport could earn excessive profits over PSE3.
- B127 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

- B128 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”.³⁷³
- B129 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:³⁷⁴
- B129.1 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
 - B129.2 resolved to proceed with construction of the second runway.
- B130 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.³⁷⁵
- B131 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.³⁷⁶

Regulatory treatment of assets held for future use

- B132 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.³⁷⁷
- B133 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.³⁷⁸

³⁷³ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 55.

³⁷⁴ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 55.

³⁷⁵ 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.

³⁷⁶ Auckland Airport “Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010” (1 August 2017), page 55.

³⁷⁷ Such land is also referred to as excluded assets, land held for future use and future development land. *Airport Services Input Methodologies Determination 2010* [2016] NZCC, clause 3.1 and definition of “excluded assets”.

B134 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.³⁷⁹

B135 The IM Determination establishes that the value of assets held for future use is determined by the formula:³⁸⁰

$$\text{base value} + \text{holding costs} - \text{net revenue} - \text{tracking revaluations}$$

B136 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.

B137 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).³⁸¹ 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

B138 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.

B139 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:

B139.1 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

B139.2 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).

B140 We noted this change:³⁸²

³⁷⁹ Commerce Commission "Input methodologies (Airport Services) reasons paper" (December 2010), paragraph 4.3.74.

³⁸⁰ *Airport Services Input Methodologies Determination 2010* [2016] NZCC 28, clause 3.11.

³⁸¹ 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.

³⁸² Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 574.

- B140.1 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;
- B140.2 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
- B140.3 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).

B141 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.³⁸³ This is provided in paragraphs B184 to B187 below.

Regulatory basis of the RLC

- B142 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).
- B143 In its submission, Air New Zealand raised an issue about the legality of the charge under the AAA.³⁸⁴ Auckland Airport responded to this issue in its cross-submission.³⁸⁵
- B144 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

- B145 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.³⁸⁶
- B146 We stated in the IM review:³⁸⁷

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

³⁸³ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 583.

³⁸⁴ 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.

³⁸⁵ 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.

³⁸⁶ Commerce Commission "Specified Airport Services Information Disclosure Requirements Information Templates" (20 December 2016), section 18(ix).

³⁸⁷ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 561.

consider the use of it to account for such circumstances more appropriate [than using the carry forward mechanism].

- B147 Therefore, we support the approach that Auckland Airport has used to disclose forecast revenue from the RLC.

Ability to extract excessive profits

- B148 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.³⁸⁸
- B149 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:
- B149.1 the airport intends to offset any revenues against the carry value of the assets held for future use;
 - B149.2 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;
 - B149.3 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
 - B149.4 if such a situation did arise, we have the ability to comment in future reviews on any concerns raised by the airport's behaviour.

- B150 We set out our reasoning for these draft conclusions below.

NPV-neutrality

- B151 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.³⁸⁹
- B152 We support Auckland Airport designing the RLC as an NPV neutral charge and its commitment to tracking the charge in a transparent manner. As noted in the IM review:³⁹⁰

³⁸⁸ Assuming those higher returns were not justified by superior performance.

³⁸⁹ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

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).

- B153 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.³⁹¹ 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.
- B154 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 B135). In effect, excessive profits could be capitalised into the value of assets held for future use.
- B155 **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.
- B156 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.
- B157 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 benchmark cost of capital (or about \$8m in today's dollars). This represents a potential 3% overstatement in the expected value of the assets held for future use.

RLC relationship to building blocks

- B158 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".³⁹²
- B159 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

³⁹⁰ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 574.

³⁹¹ Commerce Commission "Input methodologies (Airport services) reasons paper" (December 2010), paragraph C10.6.

³⁹² BARNZ "BARNZ assessment of AIAL's PSE3 pricing decision against Part 4 criteria" (28 November 2017), page 13.

against Auckland Airport's target return and the value of the assets held for future use once those assets are commissioned.

- B160 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

- B161 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.
- B162 Air New Zealand noted in its submission that Auckland Airport "provides no mechanism to account for delays or abandonment of the second runway".³⁹³ BARNZ 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".³⁹⁴
- B163 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.³⁹⁵
- B164 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.³⁹⁶ 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."³⁹⁷
- B165 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.
- B166 We also note that Auckland Airport has undertaken a detailed assessment of the need for the second runway. It notes in its pricing disclosure:³⁹⁸

³⁹³ 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.

³⁹⁴ 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.

³⁹⁵ 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.

³⁹⁶ 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.

³⁹⁷ 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.

³⁹⁸ Auckland Airport "Price setting disclosure – In accordance with clause 2.5 of the Airport Services Information Disclosure Determination 2010" (1 August 2017), page 55.

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.

- B167 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.
- B168 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.
- B169 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.
- B170 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.
- B171 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 would have alleviated residual concerns about the potential for excessive profits to be extracted in these circumstances.

Timing of acquisition

- B172 This section considers the incentives created by the RLC with respect to the acquisition of assets held for future use.
- B173 As we noted in the IM review:³⁹⁹

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.
- B174 In its submission, Auckland Airport stated the RLC "does not create any concerns about Auckland Airport having "indirect incentives" to imprudently acquire or hold

³⁹⁹ Commerce Commission "Input methodologies review decisions Topic paper 5: Airports profitability assessment" (20 December 2016), paragraph 544.

land. We understand that all parties agree that it is prudent for Auckland Airport to hold this land for the second runway development.”⁴⁰⁰

- B175 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”.⁴⁰¹ BARNZ said in its submission it agreed “it is prudent for Auckland Airport to hold the land for the second runway and start the planning process for its development”.⁴⁰²
- B176 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

- B177 This section considers the incentives created by the RLC with respect to the efficient commissioning of the second runway.
- B178 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.⁴⁰³
- B179 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.
- B180 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.⁴⁰⁴
- B181 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

⁴⁰⁰ 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.

⁴⁰¹ 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.

⁴⁰² 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.

⁴⁰³ *Airport Services Input Methodologies Determination 2010 [2016]* NZCC 28, clause 3.1 and definition of “excluded assets”.

⁴⁰⁴ Munro Duignan “Report on Issues Regarding Auckland Airport’s Runway Land Charge” (28 November 2017), page 2.

airport to develop the asset".⁴⁰⁵ This raises the possibility that the opposite effect to that considered by Munro Duignan could also be true.

- B182 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.
- B183 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.

Materiality testing of the RLC

- B184 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.
- B185 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).
- B186 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%.
- B187 We have not placed any weight on this result in forming our draft conclusion on Auckland Airport's expected profitability.

⁴⁰⁵ 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.

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 draft 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.⁴⁰⁶
- 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.⁴⁰⁷
- C6 The forecast cash flows over the duration of the pricing period comprise:
 - C6.1 revenues;
 - C6.2 opex;

⁴⁰⁶ Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 163.1.

⁴⁰⁷ Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 152.

C6.3 capex; and

C6.4 tax.⁴⁰⁸

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.⁴⁰⁹

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

⁴⁰⁸ Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016), paragraph 153.

⁴⁰⁹ 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.⁴¹⁰

We have made some 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.

We have had to make some assumptions about the impact of changes to key inputs when undertaking materiality testing

- C16 We have had to make assumptions about the impact that any changes to capital expenditure forecasts will have on the forecast asset base as part of our materiality testing. 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 aeronautical

⁴¹⁰ 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%.

pricing assets but does include CPI based revaluations to its other regulated assets. The significant majority of Auckland Airport's capital expenditure relates to its aeronautical pricing asset base and that 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 on our assessment of the materiality of Auckland Airports' capital forecasts.

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.⁴¹¹
- 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.⁴¹²
- 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 aeronautical pricing 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.

⁴¹¹ Commerce Commission "Input methodologies review decisions – Topic Paper 5 – Airport profitability assessment" (20 December 2016).

⁴¹² 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; and
- 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 aeronautical pricing 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 aeronautical pricing 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:⁴¹³
 - 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 the benchmark mid-point cost of capital.

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.⁴¹⁴

⁴¹³ 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 PSE3.⁴¹⁵
- 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 valuations

- D18 The following amendments were made to both the IM and ID Determinations with respect to asset valuations:
- 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;

⁴¹⁴ BARNZ "Attachment – BARNZ assessment of AIAL PSE3 prices against Part 4 criteria" (30 November 2017), page 12.

⁴¹⁵ Based upon our assessment of Auckland Airport's 7.1% target return for PSE3 for its entire RAB (ie, aeronautical pricing 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 'aeronautical pricing' and 'other regulated' asset values.

Our views

- D21 The new requirement to use CPI or an un-indexed approach 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 the information disclosure 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 section (ix) of Schedule 18 assists 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.

Aeronautical pricing assets

D30 The following changes to the Airports ID Determination have been introduced with respect to aeronautical pricing 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.⁴¹⁶

Our views

D33 The amendments appear to provide greater clarity about the different targeted returns for aeronautical pricing and other regulated assets, and the reasons for this. 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.

Forecast over and under-recoveries

D34 The following requirements were introduced to the Airports ID Determination with respect to forecast over and under-recoveries:

- D34.1 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;
- D34.2 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;
- D34.3 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:
 - D34.3.1 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;
 - D34.3.2 the purpose and appropriateness of including these amounts in the carry forward mechanism;
 - D34.3.3 the intended duration until these forecast over and under-recoveries have been fully offset; and
 - D34.3.4 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

⁴¹⁶ 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.

for these forecast over and under-recoveries already provided for under the IM and ID Determinations.

Stakeholder views

- D35 Air New Zealand submits 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.

Our views

- D36 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.
- D37 The revaluation moratorium adjustment:
- D37.1 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
 - D37.2 allows the opening and closing investment values to better reflect present value of the expected remaining cash flows from the assets.
- D38 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 these ID changes, so at the time it was less clear how the Pier B adjustment impacted future price setting periods.
- D39 Auckland Airport has not proposed any forward-looking risk allocation adjustment.
- D40 In response to Air New Zealand's submission we note that while there has been no proposed forward-looking risk allocation adjustment in PSE3:
- D40.1 we have seen greater discussion in consultations of these types of mechanisms, which suggests such a mechanism may be more likely to be used in future;
 - D40.2 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 capex, and this has implications around which party is best placed to manage the risks; and

D40.3 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

D41 The following requirements have been introduced to the Airports ID Determination with respect to the timing of cash flows:

- D41.1 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;
- D41.2 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
- D41.3 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.

D42 The objective of these changes was to provide transparency for interested parties to better understand an airport's approach to pricing.

Our views

D43 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.

D44 The changes have enabled greater clarity and consistency on cash flow timing assumptions compared to section 56G and we no longer have to test sensitivities around this issue.