Consumers and Markets Group

Economic regulation of capacity expansion at Heathrow: working paper on the cost of capital and incentives

CAP 1674

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Chapter 1

Summary

Introduction

1.1 In addition to our consultation papers on developing the regulatory framework and price control arrangements for Heathrow Airport Limited (HAL), we will publish further background information, detail and technical information in working papers.

1.2 This is the first of those papers, and focuses on issues relating to the cost of capital and incentives for the next main (H7) price control review of HAL. It follows on from our consultation in June 2017[1] (the "June 2017 Consultation") December 2017[2] (the "December 2017 Consultation") and April 2018[3] (the "April 2018 Consultation") on the regulatory framework to support capacity expansion at Heathrow.

1.3 We also intend to publish further consultations and updates on the regulatory framework for HAL, including on licensing issues (in September 2018), updates on affordability, financeability and the cost of capital (in November 2018) and to provide more detail of our approach to setting the interim price control for HAL (in January 2019). PwC will also produce an update of its initial estimate for HAL's weighted average cost of capital (WACC) in November 2018.

[1] See CAP 1541 Consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow www.caa.co.uk/CAP1541

[2] See CAP 1610 Economic regulation of capacity expansion at Heathrow: Policy update and consultation www.caa.co.uk/CAP1610

[3] See CAP 1658 Economic regulation of capacity expansion at Heathrow: Policy update and consultation www.caa.co.uk/CAP1658

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Scope of this working paper

1.4 This working paper covers the following issues:

- this chapter provides a summary of the working paper, with a particular focus on our future work plans;
- Appendix A provides more detail on the points raised on the cost of capital by respondents to the December 2017 Consultation and outlines our work programme for the remainder of 2018 on these matters;
- Appendix B sets out respondents' views on indexing the cost of new debt and describes our proposed way forward;
- Appendix C provides summaries of the responses to the June 2017 Consultation on incentives and describes some of the implementation issues relating to the introduction of ex ante capital expenditure (capex) incentives;
- Appendix D sets out a summary of the main issues arising from a study we commissioned from PA Consulting on HAL's approach to cost and revenue allocations and our proposals for next steps with respect to these matters; and
- Appendix E reproduces a letter we sent to HAL following its request that we clarify certain aspects of the policy set out in the April 2018 Consultation on early Category C costs and the costs of diverting the M25 motorway.

Estimating the cost of capital parameters

Background

1.5 The December 2017 Consultation described the initial range for the weighted average cost of capital (WACC) estimated by PwC[4], and the premium for the

[4] See CAP 1611 "Estimating the cost of capital for H7 (An independent report produced by PricewaterhouseCoopers LLP). referred to as "the PwC Report": www.caa.co.uk/cap1611

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additional risks associated with capacity expansion. It also outlined the process we would use to reach our final decision on the cost of capital.

1.6 Respondents provided views and detailed evidence on the CAA's approach to the cost of capital, PwC's methodology for calculating it and its initial estimate of the WACC range. Many stakeholders also provided detailed views on the specific parameters used to calculate the WACC.

1.7 The April 2018 Consultation dealt with representations on the CAA's approach to the WACC and the broader points made in relation to PwC's estimates and methodology. It emphasised the importance of creating a balanced package of incentives and that we should take appropriate account of this when setting HAL's cost of capital. It also described our initial assessment of the impact of possible *ex ante* capex incentives on HAL's return on regulated equity (RORE).

1.8 We have summarised the main points made by stakeholders on specific components of the WACC in Appendix A, together with our forward work programme in response to these points. We would welcome views from respondents on this work programme, as well as any further points or clarifications stakeholders wish to make on the cost of capital.

Next steps

1.9 Appendix A also sets out the main areas of the cost of capital that we intend to do further work on during the remainder of 2018. This work programme is summarised below. Some of this analysis will also inform our work on the NATS En Route plc (NERL) RP3 price control.

1.10 Our intention is to consider further the main issues raised by respondents on **total market returns** (TMR) including on:

- the relative weights to be placed on different historical and forward looking approaches to estimating the TMR;
- recent regulatory precedent; and
- whether the international case studies are robust and reflect appropriate benchmarks.

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1.11 We intend to assess the impact of the regulatory framework and incentive arrangements on any **WACC premium** or uplift. A key input into this assessment will be the scope and strength of any *ex ante* capex incentives and their expected impact on returns, as can be measured by HAL's RORE. Our initial analysis of these matters was summarised in the April 2018 Consultation, and we noted that relatively modest *ex ante* capex incentives would not make HAL an outlier compared with the incentives set by Ofwat and Ofgem.

1.12 Further work will be undertaken on:

- whether additional risks from capacity expansion are best dealt with by a WACC premium, adjustments to beta values, or in calibrating any risk and reward package associated with incentives (or, indeed, some combination of these measures);
- how best to calibrate the above adjustments and/or premium; and
- the timing of different risks and how these should be reflected in the H7 price control (for example, whether we should reflect risks that are likely to be more pronounced after the construction period (such as volume risk) in the WACC for the H7 price control).

1.13 We propose to undertake further work on **beta values** and draw on a balance of qualitative and quantitative evidence, including the latest financial market data and analysis of airports with similar systematic risk characteristics, as well as having regard to the impact of HAL's regulatory risk, cost incentives, construction and passenger demand. This work will cover technical issues such as those raised in the recent UKRN report on the cost of capital.[5]

1.14 In relation to the **risk free rate** (RFR), the main issue for the CAA to consider is how to balance current market evidence on gilts (which may be affected by short term volatility), against more long term historical data of index linked gilts. To inform this consideration we also intend to assess:

[5] Estimating the cost of capital for implementation of price controls by UK Regulators, by Wright, Burns Mason and Pickford (March 2018). http://www.ukrn.org.uk/wp-content/uploads/2018/03/2018-CoE-Study.pdf

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- whether there are any new developments in regulatory precedent we should take in account; and
- whether there are significant changes in market conditions that should be reflected in our evidence of the RFR.

1.15 In relation to **embedded debt** we intend to consider:

- the average cost of embedded debt over the H7 price control period;
- the appropriate benchmark indices to use in estimating the cost of embedded debt, and the use and calculation of any forward looking adjustments to these indices; and
- the role of HAL's actual costs, either as a cross check or for use as an input into the assessment of embedded debt costs.

1.16 We will consider further the points HAL and other stakeholders have raised (as summarised in Appendix A) in relation to the cost of **new debt**. As we explain in Appendix B, we are also considering adopting an approach to debt indexation that would adjust our allowances for the cost of new debt for market wide movements in the cost of debt finance (which will be outside of the control of HAL's management).

1.17 In relation to the **proportion of new and embedded debt** we will need to ensure consistency between our approach to financial structures and financeability, and our assumptions on the balance between new and embedded debt used to estimate the cost of capital.

1.18 We also explained in the April 2018 Consultation that we intend to retain a "twin track" approach to assessing financeability and the cost of capital, considering a notional approach but also assessing scenarios with higher levels of gearing. The notional approach benefits from extensive regulatory precedent across a range of sectors and focuses on HAL having continued access to relatively low cost investment grade debt finance. For H7 we may choose to focus on a particular level of gearing, but we would consult further before making such decisions.

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1.19 We have also commissioned PwC to update its estimates of HAL's WACC, which we plan to also publish in November 2018. This update will consider the evidence submitted by stakeholders, the latest evidence from financial markets and take account of any changes in our wider approach stemming from the above work programme.

Indexing the cost of new debt

1.20 In the December 2017 Consultation, we stated that we could see advantages of introducing indexation for the cost of debt for the next H7 price control.

1.21 Appendix B summarises the views of respondents on these matters and sets out our preferred way forward. This involves indexing the cost of new debt only (with a fixed allowance set for embedded debt) with a true-up mechanism for differences between forecast and actual debt costs.

1.22 We propose to undertake further work on implementation issues, including:

- the selection of an appropriate index, including consideration of the debt tenor that should be reflected in the index;
- any adjustments that we should make to reflect HAL's specific circumstances (e.g. costs associated with non-sterling and index-linked debt, weightings to reflect RAB additions); and
- whether we should refine our approach to the true-up mechanism (e.g. whether it should adjust for all, or just a proportion of, the divergence between the cost of debt allowed in setting the price control and cost of debt reflected in the index).

Incentives

1.23 The June 2017 Consultation stressed the importance of setting a balanced package of incentives which would not only protect consumers but also allow HAL to finance capacity expansion efficiently while not exposing HAL to undue risks. The package would encourage capacity expansion at the lowest efficient costs and provide the desired outputs for consumers and airlines.

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1.24 Stakeholders' responses to this consultation are summarised in Appendix C. They largely agreed with the need for a balanced package of incentives, but had substantive comments on the introduction of ex ante capex incentives.

1.25 We remain of the view that creating a balanced packed of incentives is an important objective of the price control review and that we should take appropriate account of risks in setting HAL's cost of capital and risk and reward package. Our initial assessment of the impact of possible *ex ante* capex incentives on HAL's RORE is set out in chapter 4 of the April 2018 Consultation.

1.26 As well as continuing to assess the impact of different incentives we expect to carry out further work to consider the challenges associated with *ex ante* incentives, including:

- the need for sufficiently reliable cost forecasts to underpin any ex ante incentives, and questions of how these might be developed;
- the need to define the deliverables associated with different capex allowances, so that we can identify any underspends that are due to non delivery rather than improved efficiency;
- the need for adjustment mechanisms, to avoid unnecessary rigidity and ensure that desirable design or scope changes can be accommodated even after the initial cost allowance has been set;
- considering whether adjustments for certain external cost changes might be needed;
- considering how to address the risk of "gaming" of incentives, or the risk that a change in the incentive framework could adversely affect stakeholder relationships; and
- the need to establish robust boundaries between the cost categories subject to different incentives, if *ex ante* incentives are applied only to certain cost categories.

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Cost and revenue allocations

1.27 In October 2016, we commissioned PA Consulting (PA) to carry out a review of the approach that HAL takes to revenue and cost allocations, focusing on:

- how HAL allocates expenditure between operating costs and capital expenditure; and
- how it allocates costs and revenues between different activities.

1.28 The study was not able to reach any firm conclusions on HAL's overall approach, but identified (see Appendix D) four main areas of concern:

- staff costs are allocated *ex ante* based on an estimate of the proportion of time expected to be spent on particular activities. Given this approach, there is a risk that allocations may be unreliable and/or inconsistent;
- the allocation of costs as operating activities or to capital schemes may not be robust if standard operating procedures are not followed;
- capitalisation of staff costs, which increased markedly in 2013 around the boundary between the Q5 and Q6 price controls. The PA report notes that it is the insourcing of staff members following the group reorganisation, rather than any change in policy, which is the likely cause of these differences; and
- related party transactions. These can carry risks for organisations and HAL reported a number of such transactions from 2012 through to 2015. PA consider that these may warrant further investigation as the work undertaken to date has not been able to properly assess the risks to consumers from these transactions. Nonetheless, PA note that these transactions have been subject to HAL's internal and external audit procedures.

1.29 We propose the following next steps with respect to these matters:

- the Independent Planning Cost Reviewer (IPCR) will examine the capitalisation of operating costs to satisfy itself of the accuracy and

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appropriateness of the allocations in respect of planning costs. Following this initial review, we will determine whether further work is required;

- HAL should provide to us the report prepared by Deloitte LLP on HAL's capitalisation policy, which should also help inform our decisions on whether further work on these matters is appropriate; and
- in our review of HAL's procurement policy, we will consider further the robustness of HAL's approach and whether it has evidence that its processes properly protect the interests of airlines and consumers.

Clarifications relating to our April 2018 Consultation

1.30 Following the publication of the April 2018 Consultation, HAL asked for certain clarifications regarding the treatment of early Category C costs and costs associated with alterations to the M25 motorway. Our response to HAL's request is set out in Appendix E.

Views invited

1.31 We welcome views on any of the issues set out in this working paper and, in particular, on the issues highlighted in this summary chapter.

1.32 Please e-mail responses to economicregulation@caa.co.uk by no later than 16th July 2018. We cannot commit to take into account representations received after this date.

1.33 We expect to publish the responses we receive on our website as soon as practicable after the period for representations expires. Any material that is regarded as confidential should be clearly marked as such and included in a separate annex. Please note that we have powers and duties with respect to information under section 59 of the Civil Aviation Act 2012 and the Freedom of Information Act 2000.

1.34 If you would like to discuss any aspect of this document, please contact Stephen Gifford (stephen.gifford@caa.co.uk).

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Appendix A

Estimating the Cost of the Capital parameters

Introduction

1. This appendix summarises the main issues raised by stakeholders on the components of the cost of capital in response to the publication of the work we commissioned from PwC (and published alongside the December 2017 Consultation) that estimated an early and preliminary range for HAL's WACC. It deals with:

   - total market return;
   - WACC premium;
   - asset beta and equity beta;
   - risk free rate;
   - cost of embedded debt;
   - cost of new debt;
   - proportion of new and embedded debt;
   - debt issuance costs; and
   - debt beta.

2. It also outlines the key areas in which we intend to undertake further work in developing our thinking on the WACC over the rest of 2018.

Total market return

3. PwC's TMR estimate of between 5.1% and 5.6% was based on current market expectations using dividend discount modelling (DDM) analysis of market-to-asset ratios for UK regulated utilities and investor surveys. It is lower than that used in the Q6 price control review in 2013 due to one off historical impacts that elevated historical returns, a formula effect in the calculation of RPI and PwC placing more

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