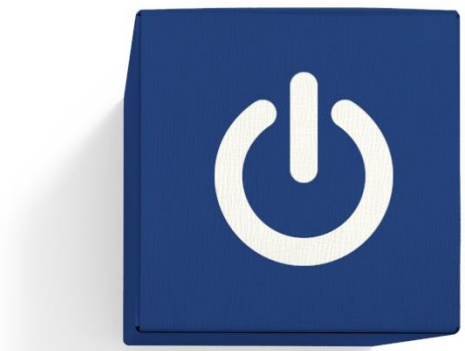
Response to CAP3044a

IATA

15 January 2025



FINAL REPORT

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Contents

1. OVERVIEW

CEPA have been appointed by IATA to provide advice in relation to the H8 price control. This report discusses our response to CAP3044a – a report by FTI Consulting on behalf of the CAA – on the cost of capital. We welcome being able to respond to this report and the approach set out by CAA in CAP3044 – the H8 Draft Methodology.

We note that the CAA agreed with stakeholders in its lesson learned review of H7 and NR23 that there were issues around timing in the last review and the CAA at H7 did not consider relative risk until beta estimates were well established. There is a risk that these issues are being repeated at H8. The 'nascent' nature of the H8 is not a reason to avoid discussing important issues over which there is likely to be disagreement between parties.

Examples of topics that we would expect to have been explicitly addressed include:

- We are unclear on whether FTI consider that the H7 relative risk beta adjustment of +0.10 from the pandemic should be removed, or whether the 14bps liquidity costs on the cost of debt relating to the pandemic are still relevant.
- FTI has not explicitly set out how the CPIH-RPI adjustment to the risk-free rate should be applied for H8, given the CAA's proposed move away from RPI as the basis for inflation indexation.
- Given the importance of traffic risk to Heathrow, the TRS mechanism will be an important determinant of risk at H8. The CAA has not provided guidance on the mechanism, including how this would operate in the presence of the capacity constraint being binding.

Moving into H8, new evidence, changes to relative risk and changes to the regulatory regime mean the CAA should not assume that a H7 roll-over is the optimal approach. We therefore agree with the sentiment of FTI that the H7 approach should be reviewed for H8. The CMA's review of the CAA's H7 determination is not suitable for this purpose. It had a specific objective – to assess whether the CAA's determination contained any errors, rather than to assess its optimality – and was made at a time when the evidence on the impact of the pandemic (including on financial parameters such as beta) was still developing.

Top-down cross-checks

There are several specific issues highlighted in our report and across the H8 price control on financial issues. Rather than focus on the bottom-up policy choices, we have tried to use more top-down cross-checks to illustrate why we consider that the cost of capital and other financial issues needs addressing.

Table E.1: Review of top-down cross checks

Cross-check title	Description
Beta – time consistency	CAA and CMA seemingly agree that Heathrow's systematic risk was unchanged between Q5 and the start of the pandemic. We infer this through use of a 0.50 asset beta point estimate. Both the CAA and CMA agree that no risk sharing has been brought in at comparator airports (i.e. AdP, Fraport and AENA) to change any relative risk assessment. Comparators AdP and Fraport have lower asset betas in the estimation window used by FTI than at the Q6 decision, when Heathrow's asset beta was assumed to be 0.42-0.52. FTI's asset beta for Heathrow is 0.52-0.71 (prior to TRS adjustment). This suggests that the qualitative view of relative risk has changed by up to 0.20 on asset beta, despite this not fitting with the CAA's statements.
Beta - traffic risk	The CAA at H7 estimated that the beta of Heathrow with zero demand / traffic risk would be as high as 0.53. This continues to apply at H8, based on FTI's report.

Cross-check title	Description
	The zero demand risk asset beta (0.53) is higher than the CAA's Q6 and H7 pre-pandemic beta estimates where Heathrow faced all demand risk. This further illustrates the issues we see with the beta estimate.
Cost of new debt	The CAA considers an iBoxx A/BBB benchmark index accurately reflects HAL's 'on the day' costs. 89bps is the current spread for iBoxx GBP non-financial corporate A/BBB 10yr+ bonds. The implied FTI debt premium for H8 new debt is 236bps. The excess premium of 147bps above the iBoxx index (i.e. 236bps minus 89bps) is not explained.
Asymmetric risk balance	The CAA's decision and justification imply that Heathrow's return includes £150-275m for bearing traffic risk, after application of the TRS. The volume shortfall to fully negate the £150-275m in cash terms is equivalent to 10-71m every year, using our indicative modelling.

We discuss in the main body of the report how we arrive at those positions and more detail.

Proposed next steps

The first best approach would be for the CAA to address the points covered in this report directly in its method statement. This would be consistent with the nature of a methodology statement and afford sufficient weight on stakeholder responses in forming their view.

We consider that substantial work is still needed for the CAA to reach a defensible and accurate judgement. If that is not feasible in the timetables set out (with CAP3044 indicating the final method statement is expected in February 2025), the CAA should clearly signal what it intends to do and by when.

We request that the CAA makes the following four commitments in that document in relation to the cost of capital.

- Undertaking a full and thorough assessment of relative risk for comparator airports and estimating what is driving differences in estimates between comparators.
    - The CAA estimates the total impact of traffic risk at Heathrow to be 0.16-0.18.
    - Whilst the difference in asset beta between Aena and Fraport is 0.23.
    - There is limited discussion of the drivers of the difference between two comparator airports, but the choice is very material.
- Providing a workbook (on a confidential basis if required) to the airlines covering Heathrow's cost of debt, including all relevant debt instruments and derivatives.
- Estimation of an asset beta (and other revenue allowances) if all traffic risk was allocated to airlines. This should include justification for why the CAA considers that Heathrow with no traffic risk would be up to 0.18 higher (i.e. equivalent to their estimation of the compensation for traffic risk) for a regulated utility network with no demand risk, if this continues to be their assessment.
- Improving the quality of the price control financial model for H8, ensuring that the resultant workbook is transparent, can be used to project potential charges for future price controls and can be understood by stakeholders.

On the first of these bullets, the CAA's CAP2618 and CAP3000 reports on H7 lessons learned report does not seem to be reflected in this report. The British Airways response to CAP2618 in March 2024, set out specifically on the asset beta that:

"*We consider that an early and comprehensive review of beta estimation is a necessary step in the H8 process. This should include a proper relative risk assessment and an adaptation of some of the policy decisions made at H7*

to reflect precedent and evolving market evidence, which will demonstrate that the return allowed by the CAA for H7 is inconsistent with the level of risk faced by HAL."

We understand that the CAA has not asked FTI to look at relative risk as part of its H8 cost of capital assessment. The less time that is available to carry out thorough analysis, the more difficult it is to reach a high-quality determination – this increases the likelihood of the CAA adopting the status quo without transparent discussion of its relevance or suitability.

In this report we recommend that the CAA adopts various policy measures. These include measures directed at estimating the cost of capital, but also broader issues around inflation, depreciation and affordability.

2. BETA

<u>Recommendation</u>:

The H8 pre-TRS asset beta should be no higher than 0.50. No further aiming up is required to reflect quantitative and qualitative risk evidence.

The TRS adjustment de-risks Heathrow by more than the estimates used by the CAA at H7. The asset beta derived by the CAA is consequently too high.

2.1. APPROACH

We make the following observations in relation to the approach set out by FTI Consulting ('FTI') on beta:

- **Incorporation of latest data**: As we emerge from the pandemic, naturally the CAA will increasingly consider evidence from after the impact of the pandemic as informative. Betas can be volatile and impacted by shock events, but the longer availability of data post-pandemic, the less that any 'noise' should drive estimates. We previously noted issues around how the CAA applied the beta framework at H7 and consider that a move away from that approach is required to avoid building in a permanent, unnecessary uplift to betas. This is consistent with the FTI proposed approach to beta and we look forward to confirmation that this will be the case.
- **Data cut-off for pandemic end**: The CAA now has evidence to use from conventional estimation windows to identify periods of elevated betas and estimate when they consider those have normalised. The number of days in which we observed atypical share price sensitivity was both very small and concentrated in a much shorter period than the whole pandemic. This means that the post-pandemic should begin independently of positions set out by health authorities and instead reflect investor behaviour. We consider that estimation windows treated as being post-pandemic should not include daily return data before 9 November 2020; the last major shock we found in our own analysis linked to the pandemic (in this case linked to a vaccine announcement).
    - The first two-year beta that is completely free from this shock impact is therefore 9 November 2022, i.e. two years later.
    - If the CAA chooses to use a 1yr rolling average of 2yr estimation window betas, this should be no earlier than 9 November 2023 to remove the shock impact effect.
    - The impact of this correction will be to reduce the asset betas estimated by FTI.
- **Exceptional period of share price sensitivity**: The CAA used the term 'pandemic duration' at H7, which led to an approach that overestimated the atypicality of share price sensitivity. If the CAA changes approach for H8, this is not relevant. If the CAA adopt their H7 approach to beta estimation, the time period of atypical share price sensitivity should be considered to be less than 1 year (i.e. from February 2020 to November 2020). The CAA has used a base assumption on 'pandemic duration' that was not balanced. If the CAA chooses to continue with this approach, the H7 multipliers of the base assumption, of 0.67x (lower bound) and 1.5x (upper bound) should be made symmetric.
- **Comparator selection**: M&A transactions have reduced the ability to use Copenhagen[1] and Sydney Airports as potential comparators on an enduring basis, though historical evidence is still relevant. M&A activity at Vienna Airport also means that recent estimates are likely not robust, though the CAA should consider Vienna a useful comparator as the shock even drops out of the sample. Given major differences in

[1] On 2 December 2024, the Danish government announced an agreement to increase the size of its stake in the airport to 98.6%. E.g., see the following news article.

asset beta over time, the relevance and risk profile of each comparator needs to be considered carefully. We consider that Zurich is better estimated against a local index, where used, given issues around currency (CHF vs EUR) that do not exist for other comparators.

- **Relative risk assessment**: We provide detailed discussion in Section 2.2. Overall, the small number of comparators, each exhibiting material differences to Heathrow Airport, necessitates detailed relative risk analysis. The increase in riskier activities for these comparators groups supports a greater downwards adjustment to beta for Heathrow at H8.
- **Capacity constraint adjustment**: We consider that the increase in passenger volumes in recent years necessitates removal of the upwards 0.00-0.10 asset beta adjustment from the H7 decision, and the asset beta estimate is no higher than the 0.50 used by the CAA as the H7 pre-pandemic estimate and the Q6 regulatory determination.
- **Impact of Traffic Risk Sharing (TRS) adjustment**: We provide detailed discussion in Section 2.3. We agree with the CAA and CMA view that TRS reduces systematic risk, but consider that the uplift applied for the effect of the pandemic, when put together with the TRS impact, leads to the approach failing a sense check.
- **Empirical measure estimates**: The CAA should ensure that any methodological choices do not lead to a directional bias and instead reflect a balanced interpretation of the data. This includes choices around daily versus weekly frequencies, net versus gross debt, local indices against pan-European benchmarks and selection of estimation windows / trailing averages. The CAA and its advisers should properly interrogate beta data given its impact on charges, including any relevant shock events.

2.2. ESTIMATING THE PRE-TRS ADJUSTED ASSET BETA

The CAA and CMA have considered systematic risk for Heathrow to be relatively constant since the Q5 decision in 2008 through to the start of the pandemic in 2020. Setting a pre-pandemic beta of 0.50 at H7 that aligns with the Q6 point estimate in 2013 suggests that previous decisions were not seen as incorrect.

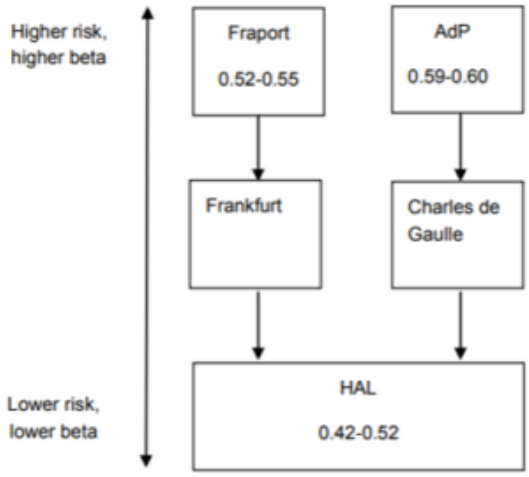
2.2.1. Comparator empirical betas

Aeroports de Paris (AdP) and Fraport have been considered relevant listed comparators against which to benchmark Heathrow Airport and empirical data for these comparators continues to be available today.

Pre-pandemic beta estimates

We present the CAA's assessment of risk at the Q6 price determination below.

Figure 2.1: CAA's Q6 assessment of relative risk



Source: CAA

Based on the daily 2yr and 5yr betas over spot, 2yr and 5yr rolling averages, the beta ranges produced by Flint for the CAA in June 2020 for pre-pandemic estimates were:

- Fraport: 0.47-0.58.
- AdP: 0.53-0.59.
- Aena: 0.52-0.60.

Heathrow's beta relative to comparators

An assumption of a 0.50 asset beta for the pre-pandemic beta is conservative, with more evidence supporting a lower figure as opposed to a higher figure.

- The estimates for Fraport and AdP are lower / equivalent to the estimates at the Q6 determination.
- The 0.42-0.52 range at Q6 was the same range used at Q5 (when the CAA adopted a 0.47 point estimate).
- PwC also used an asset beta range of 0.42-0.52 in their report for the CAA earlier in the H7 process.
- FTI in CAP3044a have taken the H7 pre-pandemic estimate of 0.50 as a suitable estimate.

For reference, we would characterise the asset betas for the CAA's preferred comparators as pointing to a 0.56 asset beta (based on the CAA's estimates of asset betas at Q6 and H7 pre-pandemic), with the CAA adopting a 0.50 asset beta point estimates in both cases, i.e. a downwards adjustment of **0.06**.

Post-pandemic beta estimates

FTI have used a cut-off date for their analysis of 31 July 2024 and estimated daily 2yr betas over spot, 1yr rolling averages and 2yr rolling averages. A two-year rolling average of a 2yr estimation window beta includes data from four years ago, hence using data from July 2020. The use of data from those dates is inconsistent with the FTI (and CAA) position around the pandemic end date for the purpose of beta estimation. It should therefore be corrected for any subsequent estimates, but currently it does not materially impact on the conclusions drawn in CAP3044a. FTI's estimates for the post-pandemic asset beta are produced below.

Averaging period	AENA	ADP	FRA	FHZN	3-comp.	4-comp.
Spot	0.72	0.68	0.56	0.64	0.65	0.65
1-year average	0.71	0.60	0.54	0.61	0.62	0.61
2-year average	0.71	0.57	0.56	0.60	0.61	0.61

Source: FTI analysis.

We consider that averages reduce the weight on a single observation and are therefore preferrable to a spot estimate, though noting that the CAA has criticised use of rolling averages on beta. We have highlighted the choice of start date and not beginning prior to 9 November 2022 for 2yr beta estimates.

The same adjustment to the evidence above would bring the asset beta down to 0.55 when placing less reliance on spot estimates. However, the short period of data available limits conclusions and is particularly susceptible to shock events distorting betas. We also consider that Zurich is better represented by a local index, given issues around Swiss France to Euro conversion – this would bring the number down further.

We note that the betas for AdP and Fraport are lower post-pandemic than pre-pandemic by 0.03 on average. The conclusion on a higher beta is driven by AENA and increases in asset beta since the pandemic.

Next steps

The approach above takes empirical betas estimates and adjusts for the risk differentials observed between Heathrow Airport and relevant airport comparator groups at Q6 and H7. If the CAA considers that the relative risk differentials remain consistent with those pre-pandemic estimates, then a 0.55 asset beta is consistent with its

previous position. If the CAA agrees with our discussion on relative risk, the asset beta may be reduced to at or below 0.50 (pre-TRS).

If the CAA considers that Heathrow is relatively riskier compared to comparators now, then the downwards adjustment should decrease. If the CAA considers that Heathrow is less risky compared to comparator airport groups, then the downward adjustment should increase.

- We consider that the latter is true, i.e. that Heathrow is notably less risky compared to comparator airport groups, and that the CAA should make a larger downward adjustment to the comparator empirical betas.
- We also assess that the 0.06 downward adjustment to asset betas applied at H7 and Q6 is too small and does not reflect the degree of risk protections at Heathrow, however we do not focus on that here, and consider that the CAA needs to undertake a full relative risk assessment of Heathrow against the airport comparator groups.

We focus on two changes in risk profile for the comparator groups to support our position:

- Change in the composition of airport comparator groups.
- Change in focus of aeronautical activities.

We find that investments in the 'core airports' (typically large European hub airports) in the portfolio of comparator airport groups are less risky than other airports, and that the share of riskier airports is increasing.
This necessitates a larger downward adjustment to empirical betas for relative risk to control from this change over time.

Similarly, we find that aeronautical activities are likely to be less risky than commercial activities (albeit dependent on what they are) and that the share of riskier activities has also been increasing.
This also necessitates a larger downward adjustment to empirical betas for relative risk.

Failure to properly control for risk changes over time at comparator airport groups will lead to an incorrect answer.

2.2.2. Changes in risk profile – comparator composition

In this section, we discuss the composition of airport group portfolios and the investments that are included in betas estimated using market data on share prices. We start with previous decisions and CEPA analysis from the H7 price control, before presenting updated analysis on information since the H7 determination.

Previous CAA decisions

The CAA has previously a) selected different estimates for UK airports, and b) adjusted betas from empirical comparator estimates. We consider this good practice.

For example, at the Q5 determination in 2008, the CAA set an asset beta of 0.47 for Heathrow, 0.52 for Gatwick and 0.61 for the Rest of BAA (namely Stansted, Edinburgh, Aberdeen, Glasgow and Southampton Airports).

This reflects that the CAA considers certain airports within an airport comparator group to not be equivalent risk. For example, systematic risk at Madrid-Barajas Airport may be less than at a smaller provincial airport also run by Aena.

Other regulatory determinations

We note that the French aviation regulator, the ART (Authorité de Régulation des Transports), has highlighted similar issues around composition when looking at beta, including in a 2023 consultation on setting the WACC[2]. The regulator stated that (paragraph 137): "the regulated scope does not necessarily present a profile of exposure to

[2] Appréciation des niveaux de CMPC des périmètres régulés des aéroports, ART, 18 April 2023.

systematic risks similar to that of all the activities of its listed operator (due to the presence of unregulated activities, sometimes international, which are potentially riskier).[3]"

CEPA view at H7

We consider how systematic risk compared to our assessment at H7. We re-present this analysis below[4].

Table 2.1: Systematic risk compared to Heathrow for H7

	AdP	Fraport	Aena	Zurich	Vienna
Passenger volatility	↑↑	↑↑	↑↑	=	↑↑
Mix effects	↑↑	↑	↑	↑=	=
Capacity constraints	↑	↑	↑	↑	↑
Single till	↑	↑	↑	↑	↑
Reg framework	↓	=	↑=	↑ =	=
Growth & development	↑	↑	=	↑	↑

Note: an upwards arrow indicates greater risk for the comparator airport than for Heathrow Airport. Two arrows are used to highlight a greater risk differential than a single arrow.

Our assessment today would be similar, though reflecting on the regulatory framework evolving for these different groups and experiences during the pandemic, for example, flexibility in changing charges or the RAB. The recent inflation shock has also demonstrated the value of inflation indexation of the asset base, in particular for Heathrow under an RPI-linked control.

A view of Heathrow being lower risk than the first four comparator groups shown was consistent with the view set out by the CAA's advisers at the start of the H7 price control process, PwC.

Share in 'core' airport(s)

The comparators available to be used by the CAA are all airport groups rather than single airports. This should not be ignored. We are interested in whether the investments outside of the 'core' airport investments are riskier or not, and the relevant proportions of those in the valuation of the listed airport groups[5].

Is investment in non 'core' airports riskier?

The CAA, in its H7 Initial Proposals (para 9.67-9.69), suggested that:

- investment in these non-core international airports is likely to be riskier than for the large hub airports.
- "While the groups contain some businesses in addition to large European airports, these businesses represent a minority of their activities and, hence, are unlikely to exert a material impact on betas"; and
- these non-core comparators did not introduce systematic bias into results as being outside of Europe may reduce betas measured against a European index.

If Severn Trent Water began investing in water networks in Brazil, Mexico, Jamaica and Colombia, we consider it unlikely that betas and perceptions of risk would not change. The valuation of the company would likely be more volatile in GBP as investors considering the totality of the investment have less certainty around the valuation of the company, and the addition of non-diversifiable risk increases the required return.

[3] Note – translated from French original language.

[4] We have removed Copenhagen and Sydney Airports given these are no longer directly relevant with new data.

[5] Core airports include Charles de Gaulle for AdP, Frankfurt for Fraport and Barcelona and Madrid for Aena.

For energy network betas, we have not seen Ofgem aim up on National Grid's asset beta as investing in a US asset reduced the observed beta for a UK-listed company, as the asset is less closely matched with the UK relative index.

We consider that higher risk investments should be reflected as relatively more risky compared to Heathrow, with a corresponding downwards adjustment to beta. If the CAA disagreed with this statement, analysis of betas against world indices is one method that can be used to assess the validity of this position, rather than a hypothetical statement that the two effects perfectly offset.

This is to some degree at odds with its Q6 determination, where the CAA considered the relative risk of HAL, Frankfurt and Paris CDG airports, and Fraport and AdP groups. It concluded that:

- HAL has lower systematic risk than Frankfurt and Paris CDG airports; and
- Frankfurt is likely to be lower than the average risk of the Fraport group and [Paris CDG] lower than the average risk of the AdP group.

We agree with this ranking and this position is strongly supported by assessing traffic volatility prior to the pandemic – a metric that the CAA and its advisers considered relevant to demand risk.

Traffic volatility

We present the standard deviation of passenger traffic volumes in Table 2.2. We consider that this strongly supports the idea of non-core airports being materially riskier than the core equivalents, and that Heathrow is very low risk when compared to these figures.

Table 2.2: Heathrow and airport group traffic volatility, 2012-19

	AdP (Paris only)	AdP (international)	Fraport (domestic)	Fraport (international)	Aena (core)	Aena (non-core)	Heathrow
Standard Deviation	1.2%	10.8%	3.1%	9.7%	2.2%	6.9%	1.7%

Source: CEPA analysis of airport published traffic statistics. AENA is from 2015-2019 only.

Commentary on risk at comparator airports

In our H7 responses to the CAA on behalf of British Airways, we included four quotes from S&P around risk at AdP:

- "In the last 12 months, Aeroports de Paris (ADP) has acquired controlling stakes in the Amman Airport Concession in Jordan and the Turkish Airport Operator Tav. As a result, we believe AdP's operational risk has increased due to higher country and currency risks exposure, as well as integration risk."
- "AdP has completed several acquisitions that resulted in significant changes in consolidation and the group's business mix."
- "Although international expansion is part of the group's long-term strategy, we think AdP's business risk will increase because the group's diversification involves increased exposure to lower quality assets that entail higher country and currency risks."
- "AdP's acquisitive strategy, which saw it purchase India-based GMR airports earlier this year for €1.3bn, followed by Almati airport in Kazakhstan for about €400m, contributed to eroding its credit metrics prior to the pandemic and increased its exposure to high risk countries."

AdP is not the only example, and we discuss AENA in more detail below.

Given that the CAA has commented on business outside of the large European airport hubs being a minority of activities and would not exert a material impact on beta, we would invite the CAA to indicate what proportion would be needed to have a 'material' impact on betas and what is meant by material in this context.

AENA

For AENA, Fitch (2024) noted that AENA has had historically higher traffic volatility than Gatwick Airport and Manchester Airport. The CAA had considered such comparators to be higher risk than Heathrow Airport, supporting a meaningful downwards adjustment to beta.

At Q5, the CAA assessed an asset beta differential of 0.14 between Heathrow and Rest of BAA assets. According to Infralogic, AENA has recently bid for Newcastle, Edinburgh and AGS Airports (Aberdeen, Glasgow & Southampton) airport stakes – all airports previously in the Rest of BAA group (0.61 asset beta). It is therefore clear that such activity points to AENA being significant higher risk than Heathrow.

Barclays (2023) have noted on AENA that:

- "We see Aena as an enthusiastic buyer of international assets, which we judge to be a risk".
- "We continue to be concerned that AENA has the strongest cash flows and the least constraints for participating in international expansion."

Conclusions

The principle that not all assets in a portfolio are equal risk should be well understood and a review of the composition of the comparator groups should be undertaken by the CAA to understand these effects over time.

We highlight with the statements in paragraphs 3.77-3.78 from FTI:

- "A drawback with the comparators used to infer HAL's beta is that they contain airports which are significantly smaller, operate under a different regulatory environment and in regions with higher traffic risk than faced by HAL"
- "HAL is not only capacity constrained but is also one of the largest hub airports in the world operating under a RAB-style regime. As a result, HAL is likely characterised by a lower level of systematic risk than that faced by the comparators. Therefore, although the beta range for H8 may be derived based on the betas of the comparators, the CAA may opt to refine its beta range and selection of a point estimate to reflect these differences."

We do not consider that AENA is superior to the other airports and would consider a reduced role for AdP and Fraport without proper analysis to be inappropriate.

Is the share of 'core' changing?

In Table 2.3 we show the weights of passengers at 'core' airports within each comparator group. We look at the period ahead of the Q6 determination in 2011-13, followed by the pre-pandemic period in 2017-19.

Table 2.3: Proportion of passengers (stake weighted) at 'core' airports

Metric & comparator group	2011-13	2017-19	2023-24
French airports – AdP Group	69%	43%	30%
German airports – Fraport Group	61%	45%	33%
Barcelona & Madrid – AENA Group	23%	22%	39%

Source: CEPA analysis of airport passenger statistics.

Empirical betas reflect future cashflows, therefore the relevant factor is the expected mix in future rather than a snapshot today. We cannot know what investors are assessing, but we have seen evidence to suggest that the share of core is likely to diminish further in future.

- AENA produced guidance in March 2024 that indicated that international activity may account for 15% of EBITDA by 2026, versus 6.7% in 2023. This is after AENA took full control of 11 Brazil airports that went

into the 2023 figures, building on six further Brazilian airports in 2020, a 51% stake in Luton Airport, and stakes in 12 airports in Mexico, 2 in Jamaica and 2 in Colombia.

- In June 2024, AENA announced plans to invest $850m into the expansion and improvement of those Brazilian airports, suggesting a material part of their portfolio will be those assets.

Conclusions

The non-core airports at each of the three comparator groups are more risky than the 'core' airport and their weight in the airport groups are growing. This requires larger downward adjustments from the airport groups to appropriately reflect risk at Heathrow.

Aeronautical revenues

We discuss the mix of activities by comparator group, this time looking at the share of aeronautical activities, as opposed to the mix of airports in the prior sub-section.

Is investment in non-aeronautical commercial activities riskier?

The CC at Q5 indicated that non-aeronautical commercial activities, e.g. real estate, had higher systematic risk than core airport activity.

We consider that this is a relevant driver of risk and should be considered.

Is the share in non-aeronautical activities growing?

We present the share of aviation services for AdP and Fraport Group prior to Q6 and pre-pandemic in Table 2.4.

Table 2.4: Airport group business mix

Metric	Airport Group	2011-13	2017-19	2023
Aviation services, % revenue	AdP	60%	43%	N/A
Aviation services, % revenue	Fraport	34%	30%	27%
Aviation services, % revenue	Aena	N/A	73%	65%
Aviation services, % EBITDA	AdP	35%	35%	26%
Aviation services, % EBITDA	Fraport	25%	24%	26%
Aviation services, % EBITDA	Aena	N/A	60%	47%
Aeronautical fees, % revenue	AdP	33%	27%	N/A

Source: Bloomberg. We note that figures may not perfectly map to the bounds of the till – figures are indicative.

Conclusions

We consider that the decreasing share of aeronautical activities is likely to have increased systematic risk of these airports relative to Heathrow.

Robustness of empirical data points

We consider the following points could indicate that comparator betas are overstating the true forward-looking estimates of risk at the comparator airports. We discuss drivers of temporary risk dynamics and shock events.

Temporary risk dynamics

The following points apply to AENA, whose asset beta is materially higher than the other comparators:

- AENA's cash position and debt facilities: AENA has very high cash holdings. This reduces net debt and leads to a lower adjustment from raw equity beta to asset beta. With €3.6bn of debt available but unutilised, investors may view AENA's long-term gearing higher than the snapshot and this could be leading to a higher asset beta than viewed by stakeholders.

- AENA refinancing risk: AENA has a significant proportion of debt maturing by end-2026 - €3.4bn. This approach increases refinancing risk, with mismatches to allowed return falling on equity investors, and likely increasing risk relative to Heathrow.
- AENA issues in relation to Catalonia: Barclay's (July 2024) have pointed to the creation of a Catalan government incorporating AENA's Catalan airports, including Barcelona. The report discusses a new commission to define a new model for Catalan airport management with a new Catalan Airport Authority. Barclays indicate that this is 'an unhealthy environment in which to run a corporation' and this is likely to have increased risk perception.
- AENA issues in relation to Luton: Whilst a relatively small part of the AENA business, NextERA is seeking to take AENA's stake in Luton Airport. This follows an award from a US arbitration panel from 2019, with the airport included in the right to seize Spanish government assets.

We also note that issues around national politics are relevant for both Fraport and AdP, with heightened uncertainty in France and previous talks around full privatisation being relevant. Other shock events around political events in March 2023 with high power in the estimation sample may also be artificially inflating European airport beta estimates; key dates in the 2023 pension reform strikes in France and the 2023 German public transport strike feature strong losses for both stock prices and market indices, potentially driving higher beta estimates for AdP, Fraport, and AENA that we would not expect to affect Heathrow.

Comparison of regulatory framework at AENA

The CAA has previously noted that AENA's regulatory framework covers its Spanish airports, not just Madrid or Barcelona. We make the following observations around DORA II (2022-26). As we are focused on the post-pandemic beta, we do not discuss traffic risk sharing here. We do not discuss airport features, such as a capacity constraints or composition of airports.

Table 2.5: Risk features in DORA II vs H7 determination

Risk feature	DORA II	H7
RAB indexation	No link to outturn inflation.	Tied to outturn RPI inflation.
Inflation and expenditure allowance	Set in nominal terms.	Set in real terms, i.e. can be uplifted by inflation.
Independent regulation	The agreement involves the capacity for the Spanish Government to make changes to framework.	The determination was set by an independent regulator, with a review undertaken by the independent Competition and Markets Authority.
Capital expenditure	Lower capital expenditure values lead to falls in the RAB, but overspends are not included in the RAB unless they meet a series of conditions – equivalent to 100% risk exposure if not.	There is a more flexible capex framework to set allowances at G3 for projects. Heathrow then only bears 25% of risk of over- and under-spend, applied symmetrically.
Operating expenditure	100% risk exposure on opex, except when justifying exceptional circumstances.	100% risk exposure on opex, except for pass-through items, such as unanticipated security costs.
Treatment of commercial revenues	There is a dual till mechanism, with no reflection of expected revenues from traffic risk.	Under a single till arrangement, the expected commercial revenues are offset from the revenue requirement each price control.
Asymmetric risk allowance	No reference.	Revenue adjustment applied.
Pension deficit repair costs	No reference.	Allowance included.

Risk feature	DORA II	H7
Finance parameter updates	Fixed for agreement.	Cost of new debt indexation applies to reduce financing risk within period.
ORCs	Not a feature of agreement.	Charges treated as pass-through to Heathrow through 'user pays' arrangement.

Source: CEPA analysis of regulatory determinations.

There are a number of risks allocated away from Heathrow to airlines and users, for example around inflation and market-based financing costs. These risks are still faced by AENA under DORA II. This is relevant for relative risk assessment and reducing comparator betas.

We have not assessed the regulatory protections for AENA's operations outside of Spain.

2.2.3. Changes in risk profile – Heathrow

The key change in this time period is the introduction of a traffic risk sharing to allocate traffic risk to the airlines from Heathrow. This is assessed separately.

The capacity constraint that was relevant prior to the pandemic will continue to be binding at H8 as things stand, and this has been flagged by the CAA and other stakeholders as a major determinant of risk. Heathrow's traffic volumes have rebounded quickly to pre-pandemic levels, faster than other comparators.

We have not conducted a full relative risk assessment of Heathrow Airport for this response, but do not consider that factors lead to a materially higher view of systematic risk at Heathrow compared to the comparators previously discussed.

2.2.4. Implications

We consider that a relative risk analysis that takes into account the above is of material importance to estimate a suitable asset beta for H8. There is no reason to delay this and it may be the most consequential decision taken in relation to the allowed return at Heathrow.

2.3. IMPACT OF TRAFFIC RISK SHARING

Once a beta has been estimated, an adjustment needs to be made to reflect the demand risk allocated to airlines from Heathrow through the TRS mechanism.

We recommended that a percentage-based approach, as applied at H7, is the right approach, but needs to be calibrated correctly.

The CAA's estimates at H7 implied that the impact of demand risk excluding the TRS was 0.16-0.18.

The CAA's H7 upper bound beta estimate of 0.71 (which has not been challenged by FTI) cannot be consistent with that assessment.

Removing all traffic risk from Heathrow would give a 0.53-0.55 asset beta at Heathrow, based on that upper bound. It is simply not credible that a pre-pandemic asset beta of 0.50 where Heathrow bears all traffic risk could shift to a 0.53-0.55 asset beta where Heathrow bears zero demand risk.

The CAA should properly set out which factors mean that Heathrow are riskier than utility networks when traffic risk is excluded, ensuring that the TRS mechanism is calibrated with reference to both aeronautical and commercial activities.

3. COST OF DEBT

Recommendation:

Revisit the cost of new debt, given that FTI's estimate includes an excess premium of 146ps relative to a benchmark driven approach.

Provide more information on Heathrow's cost of embedded debt and how this will be assessed in H8.

3.1. APPROACH

We make the following observations in relation to the approach set out by FTI on the cost of debt.

- **Cost of new debt**: FTI have indicated a real cost of new debt of 3.65% prior to the application of fees. This compares to a real risk-free rate of 1.29%. This implies a debt premium of 236bps. The current spread on A/BBB rated 10yr+ corporate debt is currently < 90bps. The CAA has indicated that it would expect HAL to perform broadly in line with this index, so we consider that the approach is flawed and the significantly higher premium is driven by an unsuitable approach to inflation.
- **Inflation to deflate the cost of debt**: We agree with FTI that investigation of using long-term inflation estimates rather than within-period inflation expectations is worthwhile. Forecasts can have significant volatility and typically involve an assumption of a return to 2% CPI inflation (with higher inflation offset by lower inflation thereafter) beyond a two-year estimation window. This can be significantly different of observed behaviour from market participants[6].
- **Cost of embedded debt**: The real cost of embedded debt has increased from -0.12% in the H7 Final Decision in March 2023 to +1.96% only 1.5yrs later. For a regulated firm with an established portfolio of long-term debt, an increase of over 200bps in a short space of time is significant and we consider that the CAA's approach to inflation is similarly leading to an overestimated real allowance here.
- **Transparency on Heathrow's debt costs**: We request that the CAA makes information available on Heathrow's actual debt costs at the individual bond level, including relevant derivatives and conversions (e.g. from non-GBP into GBP). This would improve transparency and the quality of decision-making, especially where Heathrow's actual debt costs form part of the evidence base used by the CAA.
- **Issuance and liquidity costs**: The inclusion of 14bps linked to pandemic-related liquidity costs in H7 has continued to H8. We do not think that FTI has yet engaged with this issue and we would expect such costs to be removed.
- **HAL premia**: Having better information on Heathrow's actual debt costs across all bonds would be useful. The CAA should consider the higher level of gearing chosen by Heathrow relative to the notional gearing assumption, and ensure that the impacts of this on credit rating and debt yields are properly accounted for.
- **New issuance premia**: There is limited discussion on this, though it was a feature of the H7 determination. We consider that this would need to be considered carefully to not build in a double count of efficient debt costs.
- **Index-linked premia**: The CMA's decision to remove any index-linked premium on debt provides the relevant starting point for any decision on H8.
- **Basis risk**: We agree with FTI around there being no need for basis risk uplift.

[6] If the CAA does use within period inflation expectations, the true-up approach applied by the UR on RP7 would provide additional protections around forecast error.

We discuss some of these points further in the subsequent sections.

3.2. Cost of new debt

As noted in Section 4.1, the implied spread over the risk-free rate is 236bps. However, when we look at the current spread over a non-financial corporate 10yr+ index (when comparing to a 20yr nominal gilt), this indicates a spread of 89bps at end-December 2024 – as shown in Figure 3.1.

Figure 3.1: Debt spreads for iBoxx A/BBB 10yr+ non-financial corporates

Source: Markit iBoxx, Bloomberg.

The above comparison compares nominal yields for corporate and government debt. This means that the results are not skewed by any approach to inflation. If this is corrected, we consider that the excess debt premium could be reduced by up to 150bps.

We have looked at Heathrow GBP bonds compared to the equivalent nominal gilts. The latest spread on Heathrow's 2046 and 2049 bonds versus UK gilts with the same maturity is 91bps (versus 89bps for the index), supporting the use of the spread obtained from our benchmark analysis.

3.3. Inflation

We agree with FTI that considering alternative approaches to inflation is a worthwhile exercise for the CAA. We consider that the current approach leads to an excessively high real cost of debt.

Forecasts are typically available on a semi-annual basis from the OBR and on a monthly basis from HM Treasury. The OBR forecasts provide a longer horizon, up to the next five years. There have been 30 forecasts since 2010, of which the final years of the inflation forecast has been exactly 2.0% all but twice i.e. 28 out of 30 times.

If we take the March 2024 OBR forecasts, the mean average CPI inflation estimate is 1.8% for the available inflation estimates. The RPI equivalent forecast was 2.7%. If we compare these to market-based estimates:

- 5yr CPI swaps were 2.9% over March 2024, i.e. 120bps higher than the OBR forecasts.
- 5yr RPI swaps were 3.9% over March 2024, i.e. 120bps higher than OBR forecasts.
- 5yr RPI breakeven inflation was 3.7% over March 2024, i.e. 100bps higher than OBR forecasts.

The difference between using a market-based inflation measure for this forecast was 100-120bps. Using an OBR forecast rather than a market-based estimate gives a 100-120bps higher real cost of debt in our example.

We consider that such an approach helps explain why the prevailing CAA/ FTI approach on new debt gives a premium that is materially out of line with the evidence from benchmark indices.

Market based estimates show the value to Heathrow from the inflation indexed RAB, are produced daily and can be produced to match the tenor of relevant debt. The approach also removes scope for gaming as it should lead to equivalence between nominal and index-linked debt issuance.

4. COMPENSATION FOR DEMAND RISK

Recommendation:

CAA should review allowances provided for Heathrow facing limited demand risk under the TRS mechanism and consider whether the current approach optimally allocates traffic risk.

4.1. APPROACH

H7 saw a change in the demand risk faced by Heathrow, with the introduction of the TRS mechanism. Where investors bear more non-diversifiable risk, they will require a higher return (and vice versa). The approach adopted by the CAA shows that risk allocation is not a given and the regulator should consider the allocation of risk that gives the optimal outcomes.

We recommend that the CAA undertakes an assessment of potential combinations of risk allocations and revenues (in particular the cost of capital) to test that the H7 approach continues to be optimal for H8.

We recognise that you cannot 'solve' for the right answer, but running illustrative financial scenarios should be useful. If investors require compensation in excess of the maximum revenue impact, it is unlikely to be a suitable risk allocation for them to bear the risk. It should also be noted that there may be upside and downside risks faced and the distribution of returns needs to be considered around whether this is a 'fair bet.'

It is unclear to us that the risk faced by Heathrow justifies the compensation awarded for bearing partial demand risk under the TRS mechanism (or from bearing full risk in the absence of a TRS mechanism). Having a review of risk allocation would be a useful exercise to allow stakeholders to discuss optimal outcomes.

4.2. ANALYSIS OF BENEFITS AND COSTS FROM DEMAND RISK ALLOCATION

We present an illustrative example of the benefits and costs to Heathrow where traffic volumes are 10% lower than the CAA's assumptions. We assume that the TRS mechanism is set up as per H7, with a baseline of 80m passengers, nominal per passenger charges of £25 and a £9.6bn equity RAB.

4.2.1. Benefits to Heathrow

We discuss compensation for bearing demand risk through three allowances (separate to the TRS) for Heathrow – namely, beta, asymmetric risk allowance and the traffic risk shock.

- If we take the mid-point of FTI's proposed asset beta range (0.53) and compare that to FTI's estimate of regulated network utility asset betas (0.338), we see a gap as large as 0.19 on the asset beta. We also have the 0.08-0.09 downwards adjustment applied by FTI for the impact of the TRS mechanism. These two estimates form our lower and upper bounds.
    - Assuming 60% notional gearing, this gives an equity beta impact of 0.21-0.48.
    - This is equivalent to £102-228m per annum of compensation.
- Towards the end of H7 after the pandemic impacts had dissipated, the CAA included c.£30m per annum under the asymmetric allowance.
- If the traffic forecast adjustment of 0.87% is applied and put into financial terms, this is worth c.£17m per annum.

This would give implicit financial compensation to Heathrow of £150m to £275m.

4.2.2. Cost to Heathrow

The CAA has previously indicated that the inner TRS bounds provide protection of around 41% of EBITDA protection to Heathrow when a 50% sharing factor applies. The lower figure reflects how Heathrow is impacted from lower opex and lower commercial revenues.

If we assume that passenger volumes are 10% lower than expected, we can calculate the financial cost to Heathrow (59% of 10% of 80m passenger revenues). The financial impact of lower traffic volumes to Heathrow is equivalent to £118m per annum using £25 ppax[7].

This is up to £157m per year less than our upper estimate of the implicit annual cash return to Heathrow. With the 105% sharing factor applied out of bounds, there is significant protection. If we were to assume that Heathrow faces 10% residual risk on each passenger outside of these bounds, we can assume Heathrow loses £2.50 per passenger outside of the TRS inner bounds[8]. To match the upper bound of our compensation for demand risk, there would need to be 62.8m fewer passengers below the bound (i.e. 70.8m below the forecast), so fewer than 10m total annual passengers for equivalence of costs and compensation.

4.2.3. Implications

Under these illustrative financial flows, the equivalence of benefits and costs to Heathrow of bearing traffic risk with the TRS mechanism is achieved when annual passenger volumes are 8m (lower estimate) to 71m (upper estimate) below the traffic forecasts in each and every year.

This suggests that having Heathrow are either being over-compensated for bearing partial traffic risk or the risk allocation may not be optimal. The CAA should investigate this risk allocation point further.

There are other considerations for thinking about the allocation of traffic risk:

- The reset of traffic volumes occurs at each price control review, so the level of underperformance for one price control review is even more challenging to persist over multiple price reviews and the 10-20yr period typically assumed for investment horizons of investors.
- Our estimates do include impacts on commercial revenues and this reduces the passenger shortfalls required to negate the implicit cash return to Heathrow. We consider that Heathrow under the single till regime has greater protections as these revenues are reset based on demand. Any impact on commercial revenues may be more than offset by the CAA not adjusting dual till comparators asset beta down to reflect such risks.
- The passenger volumes and TRS mechanisms currently have upside as well as downside. This needs to be considered as part of the overall package for H8, with the capacity constraint likely more binding than at H7.

Although the details are complex, the clear implication is that the allocation of demand risk fails the ‘fair bet’ principle for Heathrow, and the airlines and customers who pay those charges.

[7] This is equivalent to £165m at £35 ppax.

[8] Using the £35 ppax figure would lead to a £110m shortfall against our upper bound and £3.5 ppax outside of the TRS inner bounds. This therefore suggests that 30m fewer passengers in addition to the 8m shortfall within bounds.

5. OTHER FINANCIAL ISSUES

We discuss an assorted set of issues in this section. This includes depreciation, affordability, the price control financial model and relevant cross-checks.

5.1. INFLATION

Inflation has two primary impacts in the price control regime; namely the allocation of risk and the profiling of charges. The two issues are separable and can be considered as such.

Heathrow is largely insulated from inflation risk from the regulatory settlement. The inflation risk sits with airlines and customers, with allowances and the RAB increasing with outturn inflation.

We have previously discussed the approach to setting a real cost of capital, with a market based estimate of inflation preferred to a forecast method, where available.

We would invite the CAA to provide more clarity around how the switch to CPIH inflation indexation would impact on real cost of capital parameters, including the risk-free rate, TMR and cost of debt.

There is then a question around setting a fair bet. Ofwat has indicated that CPI inflation is more likely to have net upside for regulated networks. The CAA should ensure that any settlement is balance, the allocation of inflation risk to airlines and customers is reflected in beta, and indexation.

The airlines have indicated different approaches that could better achieve a fair bet, including caps to outturn inflation, which could lead to benefits accruing to equity investors.

We also consider that further analysis of CPIH and CPI inflation could be a useful exercise, as the two are not equivalent and gaps between the two have at times been significant and long in duration.

5.2. DEPRECIATION

We would welcome clarity on the approach adopted by the CAA on regulatory depreciation. For the H7 regulatory gross revenue requirement, depreciation represented approximately one-third of revenues. It is therefore central to per passenger charges.

The current approach is not transparent and at H7, the approach used Heathrow's estimates from their Revised Business Plan. This amounted to approximately a 20yr straight line asset approach. The CAA should indicate why such an approach is approach given the different lives of assets at Heathrow airport. This would provide more flexibility and remain consistent with a notional company approach.

The opacity of the approach makes issues around disposal valuation more challenging and this is especially relevant in the context of airports.

5.3. AFFORDABILITY

Long-term visibility is especially important in the context of airlines making decisions around future air travel. The same goes for broader questions around expansion and the resultant charges that would apply. As noted, the charges at Heathrow Airport are already the highest in the world and potential expansion.

The response from the airlines to the CAA on CAP2618 indicated that the nominal RAB growth had increased by c.4% p.a. since the start of the Q6 price control to the end of 2022. It is important that the CAA considers how feasible airport charges will be in future, especially in periods prior to capacity expansion where major investment has occurred. The CAA must ensure that the charges are consistent with efficient costs and prices.

5.4. FINANCIAL MODEL

We have previously expressed concerns over the CAA's price control financial model. This model is not transparent, involves various macros and this impedes the ability of stakeholders to understand the impact of policy choices and changing assumptions such as inflation.

Given the potential trajectory of future charges, we recommend that the CAA works on developing a suitable financial model as Heathrow develops its business plan. This should include the ability to project future charges out over multiple price controls.

5.5. CROSS-CHECKS

We note discussion over potential cost of capital cross-checks. This includes an approach that looks at the premia on equity versus the premia on debt. Given the equity premium at H7 was over 650bps and much of that approach seems to be retained for H8, we do not consider that this can be quickly rejected and attention spent on more suitable topics.

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