November 2021

H7 IP COMMERICAL REVENUE REVIEW

A report prepared for Heathrow

In this report we review the CAA's Initial Proposals for commercial revenue for H7 – focusing specifically on the decision to apply a management stretch – and set out recommendations for Heathrow's RBP Update 2.

KEY FINDINGS

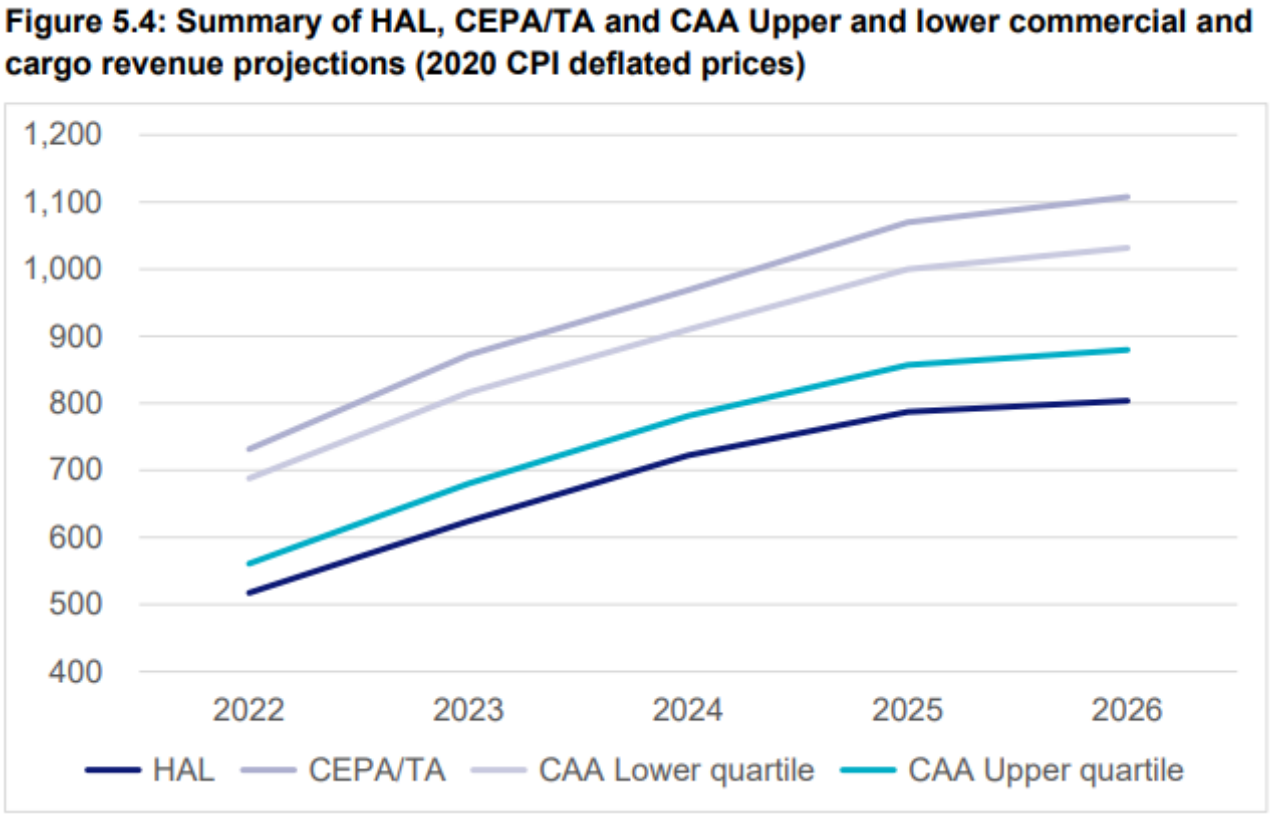
- **Management stretch assumptions:** CEPA/TA's 2% figure is ultimately a judgement loosely based on historical data at Heathrow only, with no credible supporting evidence to justify what amounts to a c£400m revenue challenge for Heathrow. There is also little to no discussion around whether it is reasonable to expect Heathrow to keep up with historical trends (which included increasing retail floor space and the number of car parking spaces due to new terminals opened in 2008 and 2014) in H7 against the backdrop of Covid, no new terminals opening, and changing consumer behaviours. Nor is there any attempt to use wider evidence from other airports to suggest that this stretch might be achievable. We also find that CEPA/TA's rationale for what the management stretch is designed to capture is flawed. For instance, CEPA/TA claim that the management stretch partly captures returns from recent capex projects coming online. However, based on our discussions with Heathrow we understand that capital investment in commercial revenues was already at historically low levels and then effectively paused in response to Covid-19.
- **Capex:** There appears to be an inconsistency between CEPA/TA's commercial revenue analysis and the CAA's proposals on capex. The CAA's proposed capex allowance does not include the £700m (2018 RPI prices) investment in commercial activities that underpins Heathrow's forecast. However, CEPA/TA's forecast includes commercial revenues associated with this capex. This appears to be an error in the CAA's overall approach. Also, given that Heathrow has historically always spent a steady level of capex on commercial revenue activities, if its ability to invest is limited going forward, it is not unreasonable to expect a negative impact on revenue. Precedent from Dublin Airport highlights that a commercial revenue forecast should take the historical capex run-rate into account.
- **Level of stretch:** Taken together, these points call into question whether CEPA/TA's approach and Heathrow's approach, which were both based on analysis of historical data, remain fit for purpose for H7, and whether the forecast should be less stretching. Heathrow could attempt to model the revenue impacts of the various downside risks that have not already been captured and propose some overlays, and/or the proposed traffic risk mechanism could be extended to give more explicit protection over commercial revenues.

1. Introduction

Background

The CAA has recently published its Initial Proposals (IP) for H7.[1] For commercial revenue, it commissioned CEPA and Taylor Airey (CEPA/TA) to review Heathrow's own forecast, as set out in its Revised Business Plan (RBP), and to produce an independent view. For its initial proposals, the CAA has produced a range which lies in between Heathrow's forecast and CEPA/TA's forecast.

Figure 1 Commercial revenue forecasts

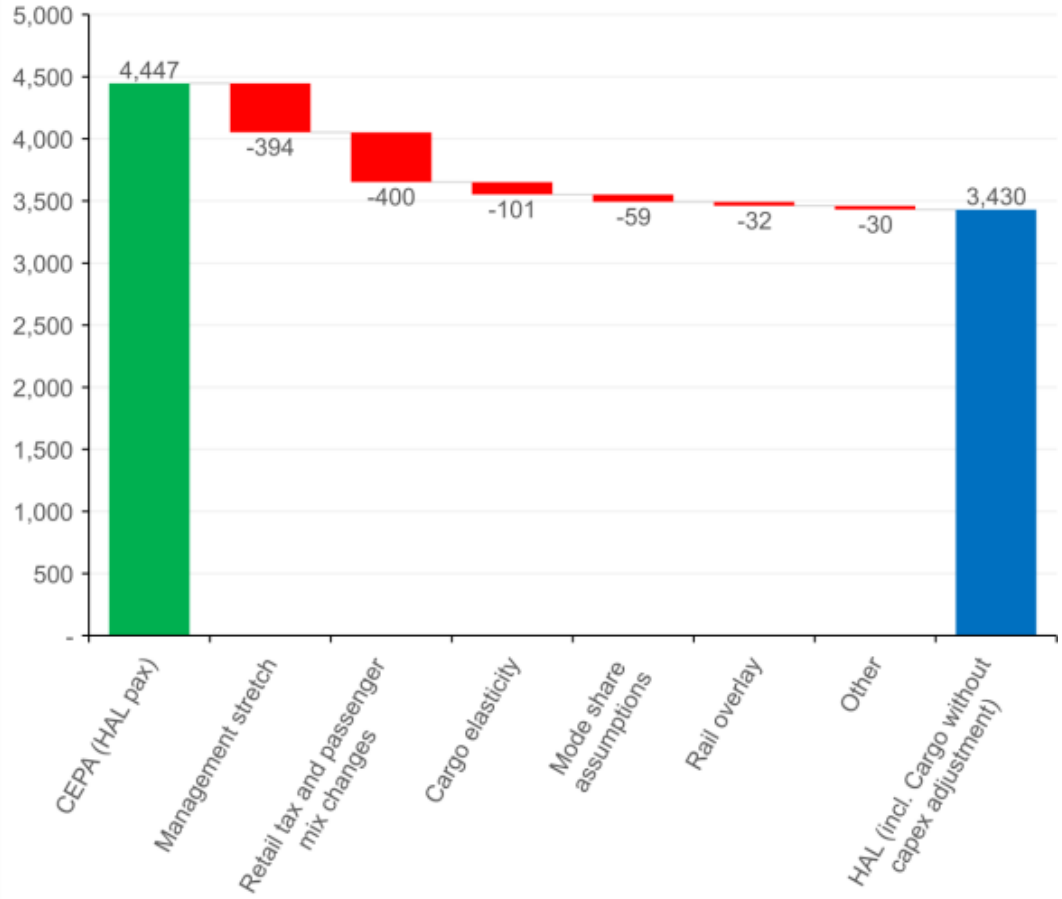


Source: CAA H7 Initial Proposals (CAP2265B)

The chart below – from the CEPA/TA report – sets out the differences between CEPA/TA's forecast and Heathrow's.

[1] https://www.caa.co.uk/Commercial-industry/Airports/Economic-regulation/H7/Consultations-and-policy-documents/

Figure 2 Commercial revenue forecasts (2020 CPI prices)[2] – differences between CEPA/TA and Heathrow



Source: CAA H7 Initial Proposals (CAP2265B)

Controlling for passenger volumes, CEPA/TA's forecast is around £1 billion (2020 CPI prices) or 30% higher than Heathrow's over the whole of H7. As highlighted above, one of the largest differences between the two forecasts is the 'management stretch' of 2% per annum applied by CEPA/TA. CEPA/TA have applied this challenge to Heathrow's forecast based on the observation that historically Heathrow has been able to increase average revenue above passenger growth rates.

The CAA has invited views from stakeholders on the key issues raised in the CEPA/TA report. However, it has not yet provided its own views on the issues, and has simply produced a range in between the two sets of forecasts rather than engaging in the details. In hindsight, this calls into question whether Heathrow faced appropriate business planning incentives. Based on the CAA's formulaic approach of producing a range in between the two sets of forecasts, it would appear that if Heathrow had produced a higher / more stretching commercial revenue forecast in its business plan, the CAA's range would also have been higher.

Also, as discussed in more detail in the rest of this report, another important difference between Heathrow's forecast and CEPA/TA's forecast – which does not

[2] CEPA/TA report values in 2020 CPI prices, whereas Heathrow's RBP reports values in 2018 RPI prices.

appear in the chart above – relates to capex. In its business plan, Heathrow proposed £700m (2018 RPI prices) of capital investment in commercial activities, which it estimated would generate more than [✂] (2018 RPI prices) in commercial revenue over the course of H7.[3] However, in its Initial Proposals, the CAA is proposing a significantly lower capex allowance, which includes no allowance for commercial activities. However, CEPA/TA's forecast includes the commercial revenues associated with this higher level of capex. In other words, CEPA/TA appear to have been instructed to take this revenue into account, even though the CAA has not allowed the associated costs elsewhere. This suggests that the CAA's proposals on commercial revenues are inconsistent with its proposals elsewhere in the plan.

The scope of this report

We have been commissioned by Heathrow to review CEPA/TA's approach with respect to the management stretch and to make recommendations for Heathrow's RBP Update 2 which it plans to submit to the CAA in December.

The structure of this report

The rest of this report is structured as follows:

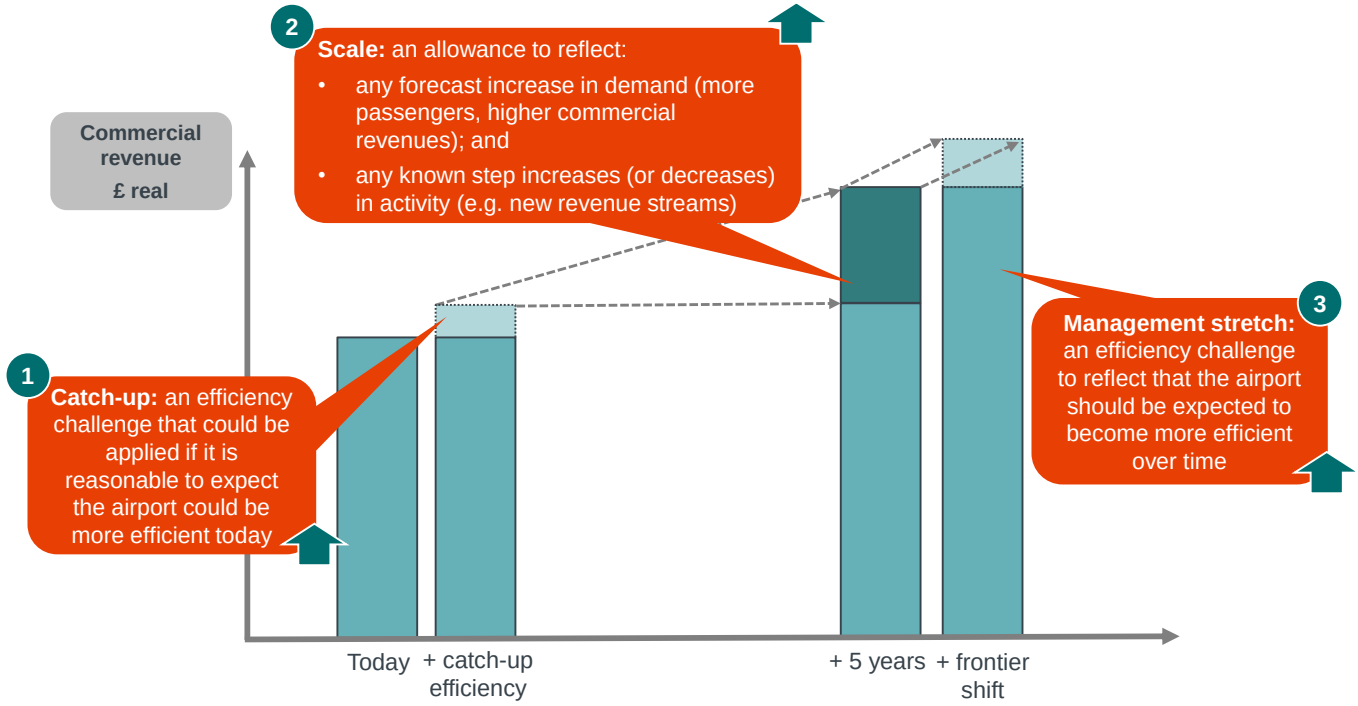
- In **Section 2**, by way of background, we present a **high level framework** for forecasting an efficient level of commercial revenue.
- In **Section 3**, we set out a high level overview of **Heathrow's approach** to forecasting commercial revenue and **CEPA/TA's approach**.
- In **Section 4**, we discuss CEPA/TA's **management stretch assumptions**. This is split out into the following parts:
  - First, we highlight that CEPA/TA's 2% figure is ultimately a judgement based on high level historical trends, with no supporting evidence.
  - Second, we discuss whether it is reasonable to expect that the observed historical trend will continue in H7 against a backdrop of Covid, a significantly reduced capex plan, and changing consumer behaviours.
  - Third, we highlight that CEPA/TA's rationale for what the management stretch is intended to capture is flawed.
- In **Section 5**, we present our overall **conclusions** and recommendations for Heathrow's RBP Update 2.

[3] As discussed in more detail in the rest of this report, Heathrow's £700m capex plan for commercial activities was split into two parts: (i) in its 'Safety Only Plan', it included a £100m allowance for its 'Protect Revenue' programme; and (ii) in its 'Optimal Plan', it included the £100m 'Protect Revenue' programme and an additional £600m for its 'Commercial Revenue' programme. Heathrow estimated that the £600m 'Commercial Revenue' programme would result in revenue of [✂] over the course of H7. Heathrow has not provided a breakdown of how much revenue the 'Protect Revenue' programme would be expected to deliver. Therefore, the £700m plan as a whole would be expected to generate at least [✂]. See Table 3.1. http://publicapps.caa.co.uk/docs/33/CAP2265B%20H7%20Overall%20approach%20and%20building%20blocks%20(p).pdf

2. Forecasting an efficient level of commercial revenue

By way of background, the chart below provides a high level framework for forecasting an efficient level of commercial revenue.

Figure 3 Forecasting an efficient level of commercial revenue



Source: Frontier illustration

This can be split into three main parts:

1. **Catch-up**: First, we need to consider the airport's current level of performance with respect to commercial revenues and determine whether this represents an efficient starting point. In other words, is it reasonable to expect that Heathrow could already be doing more today to generate higher commercial revenues? One approach to making this assessment would be to benchmark Heathrow's performance with that at other comparable airports and to identify whether it appears to be performing above or below other airports.
2. **Scale**: Second, we need to take into account that the airport is forecast to grow over time, and – all other thing being equal – with more passengers we would expect higher commercial revenues. A passenger-to-revenue elasticity could be used to help capture this volume effect. We also need to consider whether there are any known upcoming changes which might impact on commercial revenues that are not captured by volume effects, such as changes in retail capacity, new revenue streams, changes in passenger mix, etc..
3. **Management stretch**: Finally, we then need to consider whether it is reasonable to apply a 'management stretch' on top of the baseline forecast, which effectively challenges the airport to grow commercial revenues per passenger over time on top of the scale effects. This is similar to the concept of applying a frontier shift to opex. However, we would note that the concept of

management stretch is less understood and researched in academic literature and regulatory precedents.

3. High level overview of approaches

The table below provides a high level overview of how Heathrow and CEPA/TA have produced their respective forecasts, and how this fits in with the framework presented above.

Table 1 High level overview of approaches

		Heathrow	CEPA/TA
Catch-up		▪ No catch-up applied. ▪ Heathrow refers to evidence from KPMG and Pragma that Heathrow is at the efficiency frontier, and that no adjustment is required.	▪ No catch-up applied. ▪ CEPA/TA broadly accepts Heathrow's view: "We accept the starting assumption that HAL's performance in 2015 was at the efficiency frontier, based on SDG's previous analysis for the CAA. Beyond 2015, we see that HAL's ability to grow revenue has stagnated but probably not enough for it to now be materially inefficient."
Scale	Volume	▪ Heathrow applies passenger-to-revenue elasticities for different components of commercial revenue.	▪ CEPA/TA accept Heathrow's elasticities for most activities (including retail and car parking), but apply alternative elasticities for some other components of commercial revenue.
	Step changes / overlays	▪ Heathrow makes some adjustments - e.g. to capture upcoming changes with respect to duty-free shopping, the new Terminal Drop-Off Charge, and changes in passenger mix.	▪ CEPA/TA have reviewed Heathrow's proposals and make adjustments (e.g. different assumptions related to the impact of changes to duty-free shopping).
Management stretch		▪ No management stretch applied	▪ **A management stretch of 2% applied per annum**.

As highlighted earlier, a key difference between the forecasts – and the main focus of this report – is that Heathrow has not applied a management stretch whereas CEPA/TA have. The table below summarises CEPA/TA's views on how they estimated the management stretch, and what it is designed to capture. In the rest of this report we discuss these points in turn.

Table 2 CEPA/TA's assumptions on the management stretch

	CEPA/TA view	High level summary of our view
How was it estimated?	"Between 2008 and 2017, HAL's per passenger commercial revenues increased by roughly 3% per annum in real terms. For iH7, we proposed a management challenge of 2% per annum as the mid-point between HAL's proposed 1% and the 3% historic trend."	▪ See Section 4 ▪ CEPA/TA's 2% figure is ultimately a judgment (worth around £400m over H7) based on historical data. Is it reasonable to assume the historical trend should continue in H7 against a backdrop of Covid, a significantly reduced capex plan, and changes in consumer behaviours?
What is it designed to capture?	"•All the mitigations against the downside step changes assumed in our forecasts (e.g. the mitigation against the retail tax changes) •Returns from recent capital investments aimed at increasing revenue generation •Our switch from RPI indexation for future revenues to CPI indexation"	▪ See Section 4 ▪ CEPA/TA's downside step changes appear to amount to c£600m (2020 CPI price). Is it reasonable to assume that c£400m (around 66%) can be mitigated? The basis for the downside adjustments in the first place is that external market conditions are expected to change and they are relatively uncontrollable by Heathrow. ▪ The CAA has significantly has made no allowances for capital investment in commercial activities. Based on our discussions with Heathrow we understand that no commercial revenue-related capex projects will be coming online in H7. ▪ No details provided on the RPI v CPI argument, nor discussions on the appropriate price trend for different revenue streams.

4. CEPA/TA's management stretch assumptions

We have reviewed CEPA/TA's management stretch assumptions:

- First, we highlight that CEPA/TA's 2% figure is ultimately a judgement based on high level historical trends, with no supporting evidence.
- Second, we discuss whether it is reasonable to expect that the observed historical trend will continue in H7 against a backdrop of Covid, a significantly reduced capex plan, and changing consumer behaviours.
- Third, we discuss CEPA/TA's rationale for what the management stretch is designed to capture.

4.1 CEPA/TA's 2% figure is a judgement with no supporting evidence

CEPA/TA claim that the "management challenge reflects the year-on-year improvement in Heathrow management's ability to increase revenue over and above passenger growth (or other revenue drivers)." They first proposed introducing a management stretch at iH7, where they noted:

> *"Between 2008 and 2017, HAL has more than doubled commercial revenues in outturn prices, equating to an average annual growth rate of 5% per annum in real terms. Part of this increase is due to an increase in passenger numbers (which*

> *grew at c2% per annum over the same period), but this is not the full story. We think a more plausible management stretch factor lies in a range between 1% to 3% per annum in real terms. Our forecasts include a 2% annual management stretch assumption: an assumption we consider to be appropriate since it lies in the middle of the range."*

First, it is worth clarifying the 1% figure that Heathrow proposed at iH7. At a high level, Heathrow's commercial revenue forecast in its iH7 plan was calculated as follows:

- Elasticities: First, it used elasticities to produce a baseline forecast: "The impact of increased passenger numbers on non-aeronautical revenue has been incorporated by applying an elasticity of [✂] to retail and rail revenue, and an elasticity of [✂] to services revenue."[1] As noted by CEPA in its review of Heathrow's iH7 plan, these figures were based on judgement: "We understand that these forecasts have not been analytically derived, but instead are assumptions based on HAL's judgement. The elasticity of [✂] is based on the view that the marginal passenger is less valuable (in terms of non-aero revenue) than the average passenger, and that not all retail revenue is driven by passenger numbers".[2] However, for H7, Heathrow's elasticities – which are now higher – are based on analysis of historical data, and therefore better capture the relationship between passengers and revenue. Also, based on our discussions with Heathrow, we understand that since the start of Covid, retail revenues have actually fallen broadly in line with what would have been expected to see given Heathrow's elasticity estimates – i.e. we understand that the outturn relationship between passengers and revenue since the start of Covid has been [✂], whereas Heathrow's elasticity estimate is [✂], which suggests it is a robust estimate for H7.
- Management stretch: Heathrow then noted than applying these lower elasticities would understate its ability to grow revenues in future. It noted that revenue per passenger over the period 2015-2018 had grown by 1% per annum in real terms (shown below) and on this basis it decided to include a management stretch on top of its elasticities. "We have included a management stretch of 1% per annum on top of RPI inflation in our forecasts of revenue, reflecting achieved performance over the last few years. We consider that this will be challenging for Heathrow to deliver".

[1] Heathrow iH7 business plan v2

[2] CEPA: Heathrow Interim H7 Price Control: Review of HAL's initial submission

Figure 5 Non-aero revenue per passenger Q6

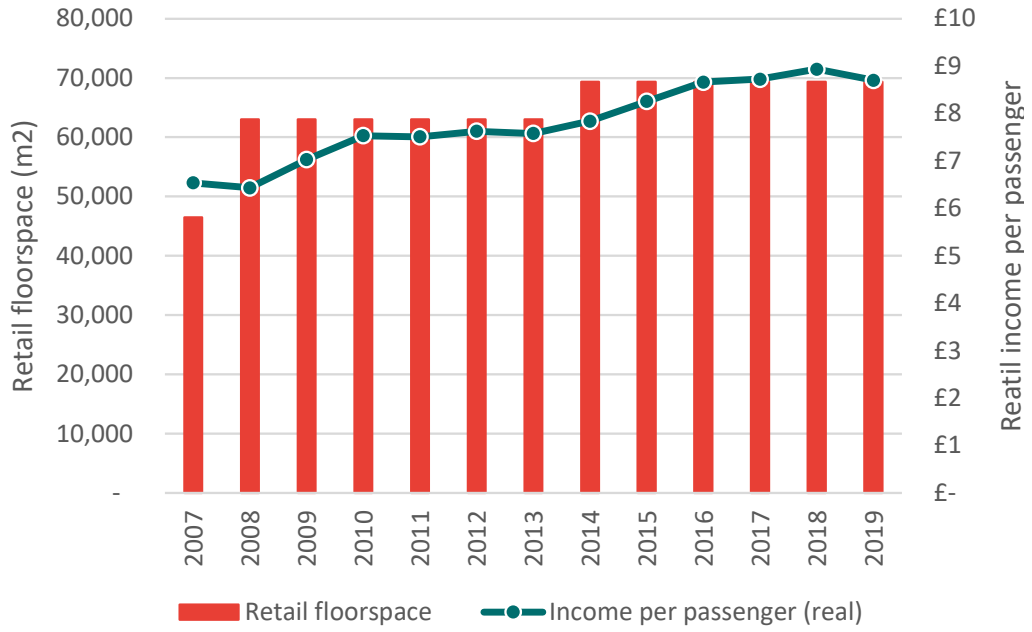
Source: Heathrow iH7 business plan v2

Heathrow's decision to apply a management stretch on top of its elasticities for iH7 therefore needs to placed in the context of using lower elasticities which were based on judgement. The management stretch applied on top was effectively increasing the elasticity to bring it in line with the observed historical relationship. For H7, Heathrow's elasticities are based on analysis of historical data which therefore better reflect the relationship between passengers and revenue. As a result, for H7, CEPA/TA's reference to Heathrow's 1% figure from its iH7 plan is inconsistent with Heathrow's new approach.

This reference to the management stretch in iH7 appears to be the extent of CEPA/TA's evidence. No other supporting evidence is provided – in its either their iH7 review of their H7 review – to support what is ultimately a high level judgement loosely based on historical data that amounts to a £400 million revenue challenge for Heathrow over H7. We believe this is not credible or proportionate. CEPA/TA have not explored the factors that might have driven revenue performance during this period, and whether those factors can be expected to continue going forward in H7. For instance, this could include analysis of exchange rates, car parking spaces, retail capacity / retail capex, and consumer trends, etc. (albeit they did apply an overlay to partially account for the impact of changes in retail taxes on retail prices).

By way of example, the chart below highlights that over the period 2007-2019, there was an increase in retail floorspace at Heathrow, and this was soon followed by similar increases in retail revenue per passenger. CEPA/TA have not explored this relationship, but have effectively extrapolated the historical trend without taking into account whether retail floorspace will grow. (As set out in the next subsection, the CAA has disallowed Heathrow's commercial revenue capex programme for H7. And even with Heathrow's full capex plan, floorspace is not forecast to increase.)

Figure 4 Retail floorspace versus retail revenue per passenger



Source: Frontier analysis based on Heathrow data

Similarly, based on our discussions with Heathrow we understand that the number of car parking spaces increased by around 60% from just under 14,000 in 2007 to 22,000 in 2017. Given this, we would expect to have seen a large increase in car parking revenues. But Heathrow is not forecasting an increase in the number of spaces for H7.

As noted, there are parallels between a management shift for commercial revenues and a frontier shift and real price effects for opex. For their analysis on opex, CEPA/TA carried out a review of regulatory precedents and various productivity studies to help inform their frontier shift assumptions, and they also considered inflation / real price effects for different cost components. Given the parallels, we might have expected to have seen a similar framework and similar levels of detail for the management stretch – especially given the size of the challenge. For instance, this could have included a review of management stretches at other airports and sectors (akin to TFP studies), and analysis of factors such as exchange rates, retail capacity, and consumer trends, etc. (akin to real price effects – albeit they did consider some overlays, but not for all factors). However, CEPA/TA have not gone into the same level of detail, and the 2% figure remains an unsupported judgement.

Also, if CEPA/TA believe that Heathrow is at the efficiency frontier with respect to commercial revenues, then we might expect to have seen similar improvements at other airports – or arguably even greater improvements at other airports as those not at the frontier would have greater scope to achieve catch up efficiencies in addition to management stretch. However, KPMG's benchmarking report for Heathrow shows that, relative to a sample of other airports, Heathrow's performance relative to the expected value has actually improved over time.

Figure 5 Commercial revenue efficiency benchmarking

Source: KPMG Airport Commercial Revenue Efficiency Benchmarking December 2019

KPMG notes:

> *"Figure 1 [above] shows that for an airport of Heathrow's size and customer-base, its relative performance in generating commercial revenue has generally improved since the 2007-08 financial crisis to a position where it is ahead of where we would expect it to be based on our models, and similar to the frontier airport in 2018. The trend for total commercial revenue is also generally true for the separate components of commercial revenue including retail revenue, property revenue and car parking revenue."*

This calls into question whether management stretch is indeed a valid concept. While there are parallels with frontier shift for opex, we would note that management stretch is less understood and researched. Achieving a management stretch for commercial revenues is arguably less controllable than achieving a frontier shift for opex. For opex, Heathrow has a reasonable degree of control over large parts of its spending, and might be expected to achieve efficiency gains over time, for instance through automation, and new software, etc.. However, commercial revenue is arguably less controllable, and a hypothetical efficient operator might not expect to see an increase in revenues over time.

The 2% figure is therefore ultimately presented as a judgement, but one that has a huge impact on Heathrow's revenue forecast – around £400 million over H7. To make this sort of adjustment we believe CEPA/TA should be required to provide credible supporting evidence to demonstrate that such an assumption is reasonable. However, for both iH7 and H7, CEPA/TA have presented little to no supporting evidence.

4.2 CEPA/TA's use of historical data is not fit for purpose for H7

We have also considered whether it is reasonable to use the 2% figure – based on historical data – for H7, especially against the backdrop of Covid, and potential impacts on retail, consumer behaviour, and Heathrow's capex programme.

Covid impact on retail and consumer behaviour

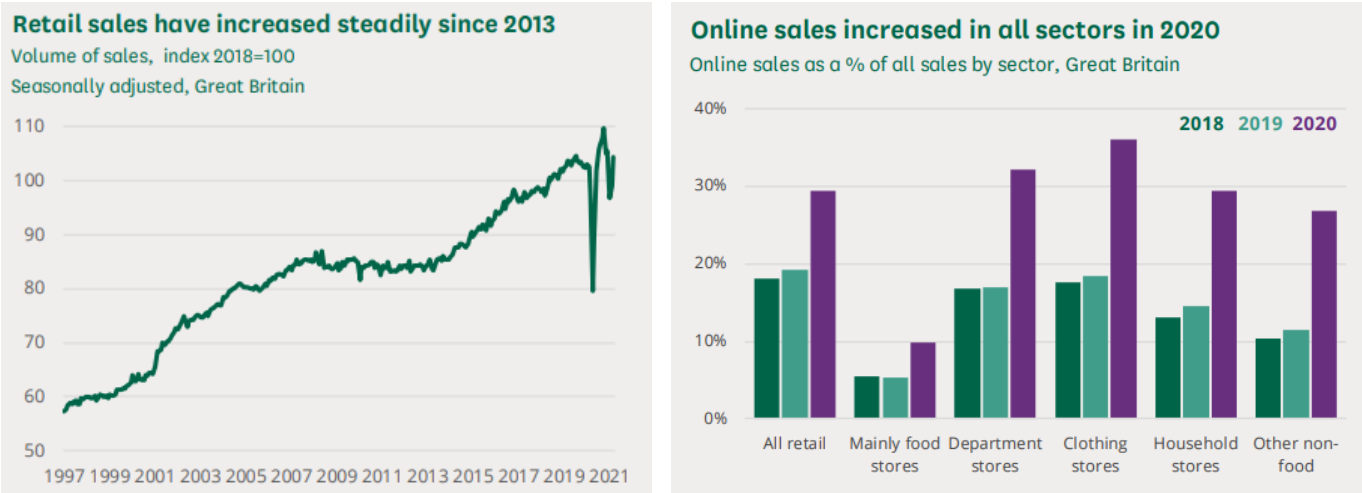
We understand that Heathrow's commercial arrangements with retailers vary from retailer to retailer, but that they generally function as either a revenue share or a profit share. Heathrow is therefore exposed to various risks that it has limited control over – both business as usual risks as well as Covid-related risks. For instance, retail demand is likely impacted by exchange rate volatility (for non-UK based passengers), as well as consumer trends, and external policies – albeit CEPA/TA have made adjustments to their forecast to account for part of the impact of changes in retail taxes. There will also be significant uncertainty with respect to Covid, where shops could conceivably be forced to close or have capacity limits, or where passengers may be less inclined to shop to maintain social distancing.

We understand that Heathrow has recently renegotiated terms with a number of retailers and has accepted lower terms. In practice, this will have been driven partly by changes in retail taxes as well as Covid impacts. CEPA/TA have made some allowances for the retail tax impact (albeit as discussed below, it also argues that the management stretch partly captures Heathrow's ability to mitigate against this impact), but they have not made any allowances related to Covid.

[✂]

Also, it is worth placing the 2% management stretch assumption in the context of the retail sector more generally. The first chart below highlights that retail sales in Great Britain have increased over time. However, in the years immediately after the 2008 Global Finance Crisis, they were relatively flat, which could give us an indication that sales could struggle post-Covid. Also, there has been a clear shift towards online shopping, across all components of retail, which is likely to impact Heathrow going forward.

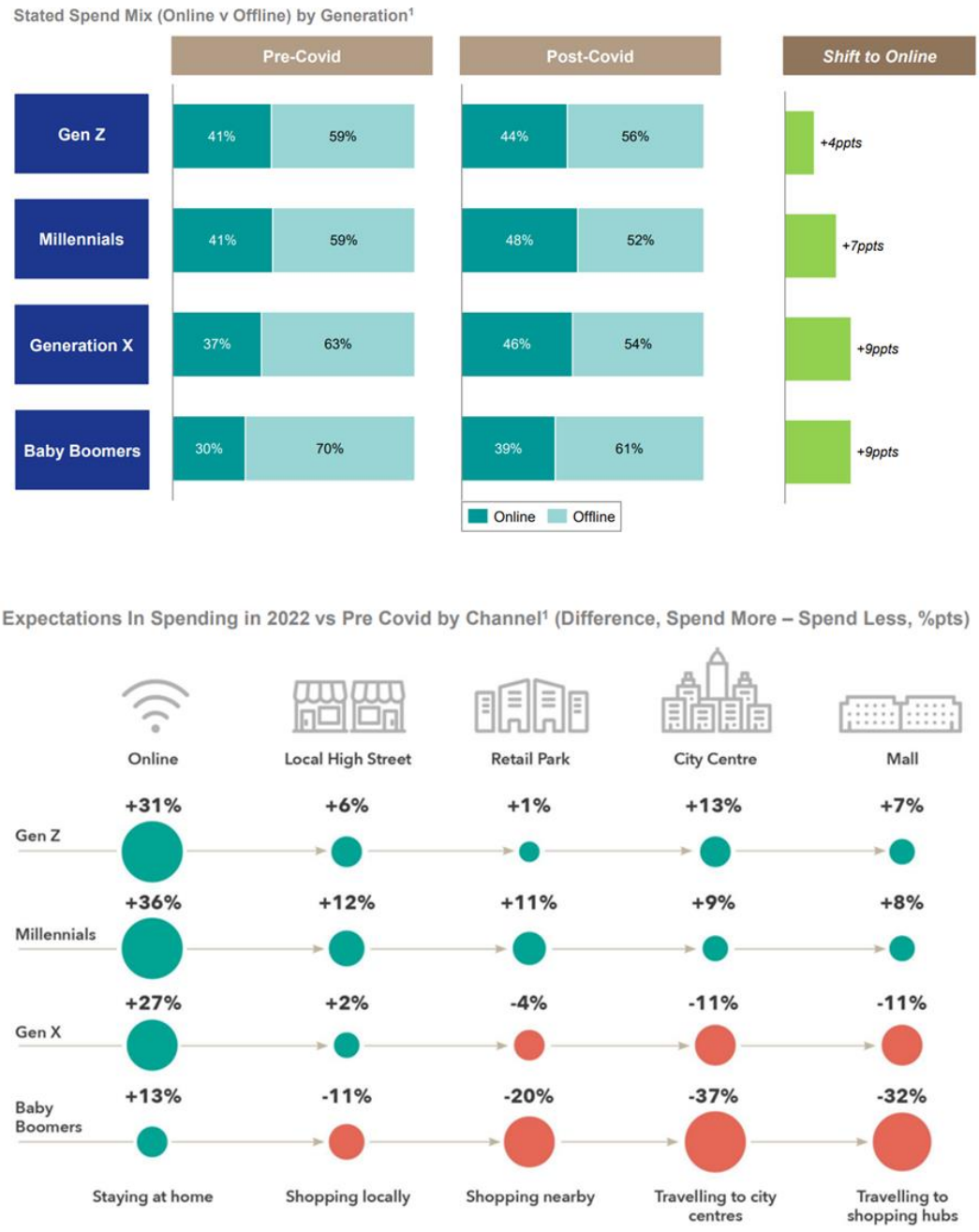
Figure 6 Retail sales and online sales in Great Britain



Source: House of Commons Briefing Paper: Retail Sector in the UK, May 2021
https://researchbriefings.files.parliament.uk/documents/SN06186/SN06186.pdf

Heathrow also refers to market research which suggests that this trend towards online shopping is more pronounced amongst older generations – who tend to disproportionately make up Heathrow's passenger base – who are now also less likely to shop in traditional shopping hubs, like airports, than they were before Covid.

Figure 7 Older generations are shopping online more, and shopping less at traditional shopping hubs



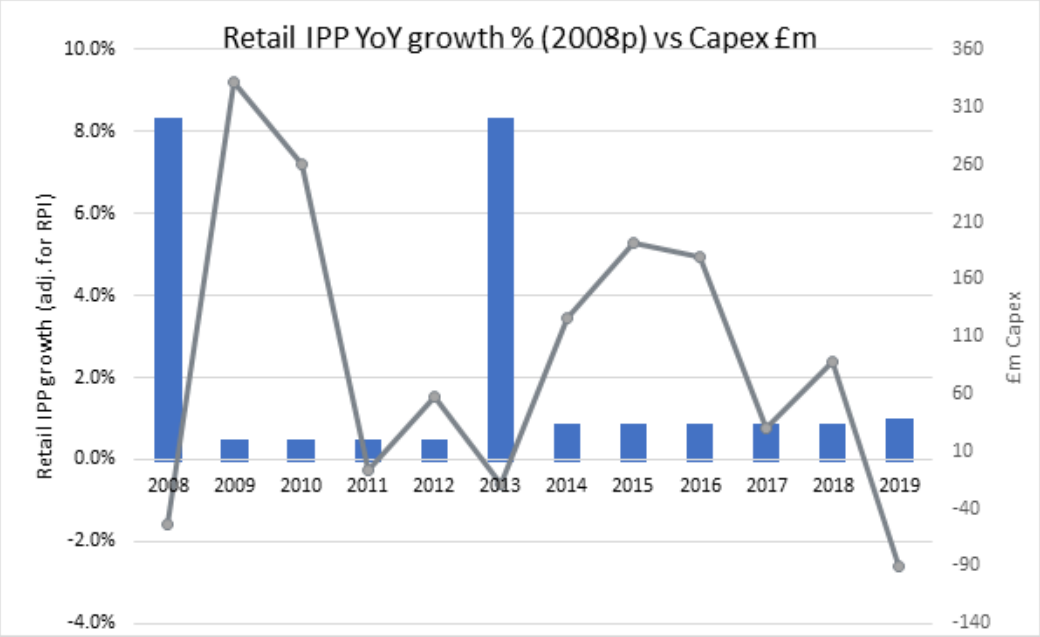
Source: OC&C 'Outlook for demand – selected data' November 2021

Taken as a whole, these points suggest that a 2% management stretch can be considered particularly optimistic. It is plausible that in the coming years an efficient operator at Heathrow would see a decrease in commercial revenue per passenger.

Significantly reduced capex plan

Heathrow could conceivably increase commercial revenues by increasing capex on commercial revenue activities. The chart below highlights that Heathrow has historically spent a steady amount of capex on commercial revenue activities – including lumpy investments – which has resulted in increases in income per passenger (IPP).

Figure 8 Capex on commercial activities versus growth in income per passenger



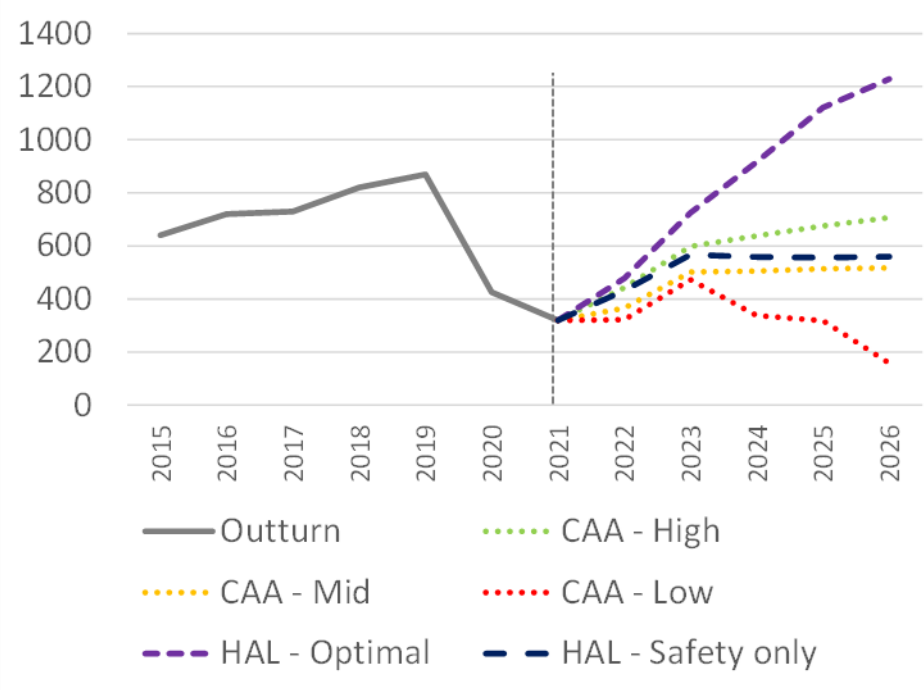
Source: Heathrow analysis

For instance, as highlighted earlier, this includes increasing space for retail and car parking, which resulted in an increase in revenues.

Therefore, this historical run rate of capex in part explains Heathrow's historical performance on commercial revenues and therefore impacts on the observed elasticities and management stretch – although this has not been discussed by CEPA/TA. Or in other words, if Heathrow had spent less capex historically on commercial revenue activities, we would expect to have seen lower commercial revenues.

In its Initial Proposals, the CAA is proposing a significantly reduced capex plan compared to Q6. This is shown below.

Figure 9 Capex forecasts - £m, 2020 CPI real prices



Source: Frontier analysis based on the CAA's IP

This includes disallowing all of Heathrow's proposed £700m (2018 RPI prices) of capital investment in commercial activities. This was split into two parts:

- in its 'Safety Only Plan', it included a £100m allowance for its 'Protect Revenue' programme; and
- in its 'Optimal Plan', it included the £100m 'Protect Revenue' programme above and an additional £600m for its 'Commercial Revenue' programme.

Heathrow estimated that the £600m 'Commercial Revenue' programme would generate around [✂] (2018 RPI prices) of revenue over the course of H7. It has not provided a breakdown of how much revenue the 'Protect Revenue' programme would be expected to deliver. Therefore, the £700m plan as a whole would be expected to generate at least [✂] in revenue. Given the CAA's proposals to not allow any capital investment in commercial activities, it is reasonable to expect that Heathrow may have limited scope to keep up with historical performance, and arguably a less stretching forecast should be used.

Also, there appears to be an inconsistency between CEPA/TA's analysis and the CAA's proposals on capex. While the CAA is proposing to not allow any capital investment in commercial activities, CEPA/TA's forecast includes the commercial revenues associated with this capex. For instance:

- Of the £63m forecast investment in digital and media, CEPA/TA note "we agree with HAL that the other initiatives and the back of house optimisation work in 2022 would benefit from a payback throughout the H7 period from higher retail revenues".

- Of the £257m forecast investment in surface access, CEPA/TA note "as investment in alternative uses for car parks, will protect commercial revenue streams, it is likely that this will generate additional revenue in H7".
- Of the £25m forecast investment in cargo, CEPA/TA note "this is likely to generate some revenue in H7".

In other words, CEPA/TA appear to have been instructed to take this revenue into account, even though the CAA has not allowed the associated costs. This appears to be an error, or at least an inconsistency in the CAA's overall approach.

By way of precedent, we note that the CAR in Ireland discussed making adjustments to its commercial revenue forecast for the 2020-24 control for Dublin Airport to reflect capex on commercial revenue activities. At a high level, its approach was as follows:

- First, it produced a baseline forecast by taking the passenger forecast and applying revenue elasticities which were based on historical data.
- Second, it then considered capex projects associated with commercial revenue activity coming online and whether the baseline forecasts needed to be uplifted to take account of the extra revenue potential. However, it noted: "Increases in commercial revenues derived from projects in past capital investment programs since 2001 are implicit in the data and the elasticities. Examples of these large-scale projects are the opening of new retail and office space in Terminal 1 (T1X) or Terminal 2 and associated car parks. Therefore, we concluded, for the most part, our targets were sufficiently challenging without adding further uplifts".[4] For retail, it noted: "The CIP [Dublin Airport's large Capital Investment Programme] contains a number of projects specific to this category of revenue, a number of capacity projects that include retail elements and a couple of IT projects that contain enabling technology. We do not propose uplifting retail revenues for these projects as, first, similar projects in previous periods would be captured in our elasticity and, second, part of this expenditure is required to protect this revenue stream into the future" This highlights that a commercial revenue forecast should take the historical capex run-rate into account. In the case of a significantly reduced capex programme, this would suggest that downward adjustments should be made as the historical elasticity based on higher capex figures may be too stretching.

In general, CEPA/TA have not considered in sufficient detail the role of capex in explaining Heathrow's historical revenue performance, nor in its ability to outperform in H7.

4.3 CEPA/TA's rationale for what the management stretch is designed to capture is not reasonable

As highlighted in Table 2, CEPA/TA note that the management stretch is designed to capture:

[4] https://www.aviationreg.ie/_fileupload/2019/Draft%20Determination/2020-2024%20Draft%20Determination.pdf

- "All the mitigations against the downside step changes assumed in our forecasts (e.g. the mitigation against the retail tax changes)
- Returns from recent capital investments aimed at increasing revenue generation
- Our switch from RPI indexation for future revenues to CPI indexation"

We discuss these points in term.

Downside mitigations

CEPA/TA have made various downside step charges / overlays to its commercial revenue forecast to take account of known upcoming changes in the market. For instance, they estimate that retail revenues will fall as a result of retail tax changes (albeit based on our discussions with Heathrow we understand that they have only controlled for part of this impact) and changes in passenger mix.

CEPA/TA suggest that the management stretch can be seen in part as capturing Heathrow's ability to mitigate against these negative impacts and ensure that revenues do not fall as much as forecast.

However, having reviewed CEPA/TA's underlying spreadsheet, we would note that the downside step changes appear to amount to around £600m (CPI 2020 prices) in total over H7. The fact that the management stretch amounts to around £400m (CPI 2020 prices) over H7 suggests that CEPA/TA appear to believe that Heathrow should be expected to mitigate this impact by around 66%. In order words, CEPA/TA have estimated these negative impacts (often using more conservative assumptions than Heathrow), but they then argue that Heathrow should actually be able to mitigate a large part of the impact – which is a judgement based on no supporting evidence. In our view this is unreasonable. Presumably, the basis for the downside adjustments in the first place is that external market conditions are changing and they are relatively uncontrollable by Heathrow. Therefore, a 66% mitigation would seem implausible.

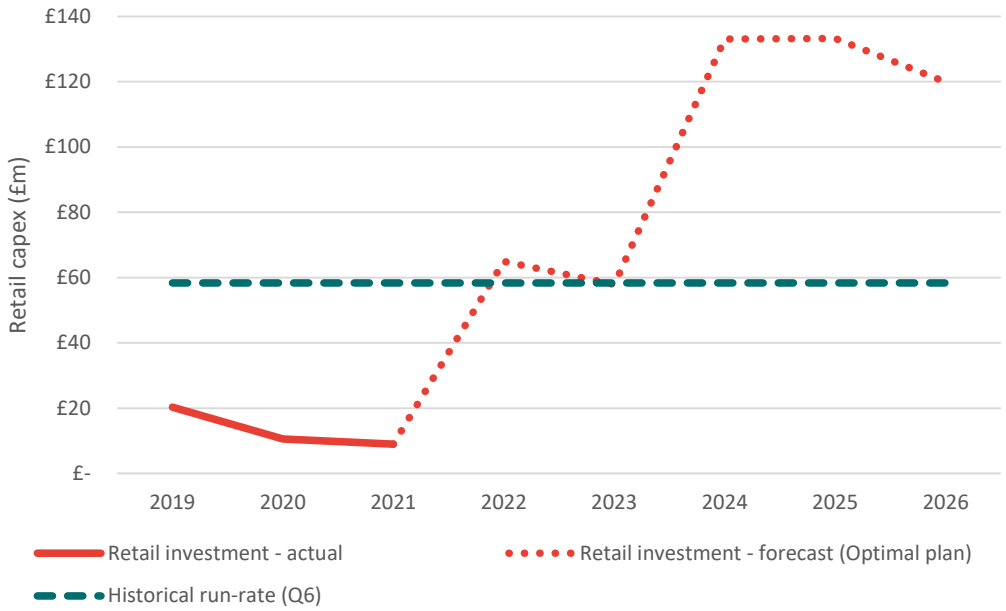
If CEPA/TA believe that the downside step changes can be mitigated against, then arguably the management stretch should be applied to the downsides only rather than to commercial revenue as a whole.

Capex and commercial revenues

CEPA/TA note that the management stretch can also be explained in part by the "returns from recent capital investments aimed at increasing revenue generation".

First, based on our discussions with Heathrow we understand that there are no recent capital investments aimed at increasing revenue generation coming online. Indeed, commercial capital investment was already falling post Q6 and paused almost entirely in response to liquidity concerns during the demand crisis (shown below). Heathrow estimates that its average capital investment on commercial activities during Q6 was around £60 million per annum. However, having reduced spending in 2019, 2020 and 2021 in response to Covid, in cumulative terms it is currently around £135 million below this historical run-rate. Its capex plan for H7 was designed to correct this shortfall.

Figure 10 Heathrow's recent capex on commercial activities has been below its historical run-rate



Source: Frontier analysis based on Heathrow data

It is therefore unreasonable for CEPA/TA to conclude there are new or enhanced revenue opportunities realisable in H7 as a result of capital invested in Q6 or iH7. Perhaps CEPA/TA are referring to the capex included in Heathrow's RBP. But as highlighted earlier, the CAA is proposing to not allow this spending.

Second, as highlighted above in the precedent from the CAR in Ireland, there should also be a discussion as to whether this extra revenue is already implicitly included in the historical elasticities, in which case it is not really a step change, but rather a continuation of the historical trend.

Ultimately, we consider CEPA/TA's argument to be flawed.

On a related issue, an alternative interpretation of the management stretch is that Heathrow could be expected to increase commercial revenues by creating brand new revenue streams – albeit CEPA/TA have not presented it in this way. However, we understand that Heathrow has already identified new revenue streams and included them in its in baseline commercial revenue forecast, including the new Terminal Drop-off Charge. This revenue stream is also included in CEPA/TA's forecast. We understand that Heathrow has not planned for any new revenue streams on top of the Terminal Drop-Off Charge, and its ability to do so will likely be further limited if its capex plan is reduced.

Inflation

Finally, CEPA/TA argue that the management stretch also captures a switch from RPI indexation for future revenues to CPI indexation. The suggestion here is that CEPA/TA are assuming that, all things being equal, revenues will increase over time in line with CPI, rather than with RPI (which is generally higher).

As noted earlier, there are parallels here with the approach to applying real price effects for opex. For opex, CEPA/TA have considered for each cost category the

most reasonable input price trend to use. For instance, for labour costs, this includes applying forecast levels of wage increases, rather than applying more general inflation measures such as CPI. And for energy costs, this includes applying more bespoke forecasts as opposed to CPI. However, for commercial revenues, CEPA/TA have not engaged in the same level of detail on the most appropriate approach for each revenue stream. As highlighted above, we believe that Heathrow is exposed to various downside risks – especially related to Covid – and a more detailed review might actually result in lower revenues.

Other

We note that CEPA/TA have applied the management stretch to all subcategories of commercial revenue (excluding ORCs, terminal drop-off charge revenue, and Red Terminal cost recovery) with limited discussion on how achievable such a stretch is in practice. For instance, the stretch has been applied to track access revenue. However, based on our discussions with Heathrow, we understand that its agreements with track access-seekers are based on fixed long-term contracts, meaning in practice Heathrow has no scope to increase revenues – and these charges are also regulated.[5]

CEPA/TA's blanket approach therefore fails to take into account whether such a stretch is possible for different components of commercial revenue. The decision not to apply the management stretch to ORCs is also interesting, and is not discussed in detail by CEPA/TA. If the rationale is that Heathrow has limited ability to grow these revenues on a per passenger basis, then arguably a similar logic would apply to other elements of commercial revenue.

5. Conclusions and recommendations

We have reviewed CEPA/TA's approach to estimating the management stretch, and their rationale for what it is intended to capture.

- The 2% figure is loosely based on Heathrow's performance over the period 2008-2017. However, there is little to no analysis or commentary on what might have driven performance during that period, and whether that trend can be expected to continue in H7. For instance, Heathrow increased retail space and the number of car parking spaces during this period – which was not discussed by CEPA/TA. There are parallels between applying a management stretch for commercial revenues and applying a frontier shift for opex. For opex, CEPA/TA reviewed regulatory precedent on frontier shift and considered real price effects for various cost categories. However, they have not gone to the same level of detail here. The 2% figure is ultimately a judgement, with no supporting evidence, but it has a c£400m (CPI 2020 prices) impact on Heathrow's revenue forecast.
- CEPA/TA have not considered whether it is appropriate to apply the management stretch for H7 against a backdrop of Covid, a significantly reduced

[5] See ORR information on Heathrow's 10 year agreement https://www.orr.gov.uk/sites/default/files/om/2018-05-21-application-for-consent-to-obtain-recovery-of-costs-incurred-in-operation-of-the-heathrow-rail-infrastructure-decision.pdf

capex programme, and changing consumer preferences, which all pose a significant downside risk for Heathrow.

- CEPA/TA's rationale for what the management stretch is designed to cover is weak. CEPA/TA argue that it party captures the following points:
  - Heathrow's ability to mitigate against downside step-changes (e.g. changes in retail taxes). These step-changes appear to amount to around £600m for H7. Given that the management stretch amounts to around £400m, this would suggest an unreasonably high level of mitigation – and ultimately this is a judgement with no supporting evidence. If this was the intention of the management stretch, then perhaps it should have been applied to the £600m directly, rather than to total commercial revenue.
  - CEPA/TA note that Heathrow can expect to earn "returns from recent capital investments aimed at increasing revenue generation". However, based on our discussions with Heathrow we understand that there are no recent capital investments aimed at increasing revenue generation coming online.
  - CEPA/TA argue that the management stretch also captures a switch from RPI indexation for future revenues to CPI indexation. The suggestion here is that CEPA/TA are assuming that, all things being equal, revenues will increase over time in line with CPI, rather than with RPI (which is generally higher). However, in contrast to opex, CEPA/TA have not engaged with the details of what the most appropriate price trend is for each revenue stream. Heathrow is exposed to various downside risks – especially related to Covid – and a more detailed review might actually result in lower trends.

Also, there appears to be an inconsistency between CEPA/TA's commercial revenue analysis and the CAA's proposals on capex. The CAA is proposing to not allow Heathrow's proposed £700m (2018 RPI prices) of capital investment in commercial activities. However, CEPA/TA's forecast includes part of the commercial revenues associated with this capex.[6] This appears to be an error. Precedent from Dublin Airport highlights that a commercial revenue forecast should take the historical capex run-rate into account.

Given the uncertainty over H7 and the downside risks that Heathrow is exposed to, this calls into question whether Heathrow's approach – based on analysis of historical data – remains fit for purpose, and whether the forecast should be less stretching. Heathrow could attempt to model the revenue impact of the various downside risks and propose some downside overlays, and/or the proposed traffic risk mechanism could be extended to give more explicit protection over commercial revenues.

[6] As noted earlier, Heathrow estimates that this £700m of capex will generate at least [≫] in revenue over the course of H7. We recommend that Heathrow estimates the total commercial revenue that this capex was expected to generate and apply this as a negative overlay to its revenue forecast if the capex is not allowed