

Virgin Atlantic Airways – response to the CAA’s consultation on core elements of the regulatory framework to support capacity expansion at Heathrow (CAP 1541)

Introduction

Virgin Atlantic (VAA) welcomes this opportunity to respond to the CAA’s consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow. We welcome the CAA’s continued engagement on how the regulatory approach to expansion at Heathrow can best be tailored and, are happy to follow up on any elements of this submission with the CAA in more detail.

This response follows the structure of the CAA’s consultation document in the same order and will cover the following main issues in turn:

- The Regulatory Framework and Economic Incentives;
- Cost Efficiency and Incentives;
- Affordability and Financeability;
- Surface Access;
- Timetable.

Our key concerns are with ensuring affordability is achieved for our passenger in this process, maintaining an appropriate level of risk and that risk sits with the entity best able to manage it, and ensuring that a look into the various regulatory options and their impacts remain fully open.

In addition to this, our other key concern is the treatment of a further extension to Q6, how this will be taken forward to ensure overperformance is addressed, and the timeframe for the final decision.

The Regulatory Framework and Economic Incentives

The form of economic regulation applied by the CAA in the UK is ‘incentive-based’ price cap regulation applied to a ‘single till’. This approach is found in other regulatory regimes including that applied by the Commission for Aviation Regulation (CAR) in Ireland in respect of Dublin Airport and therefore there is a basis for its use here. Therefore, we support the use of the single till combined with a RAB based approach.

While we recognise that it is not possible for the CAA to use its existing powers to force the delivery of the expansion programme, that being said the CAA should facilitate the ability for airlines to work with other suppliers where appropriate. This should particularly be the case if it will support the delivery of the scheme within our parameters of affordability.

While we note the potential benefits associated with engaging third parties, including increased competitive pressures and better affordability and financeability, there would need to be the appropriate governance procedures in place. At this stage, we would like to ensure all options are thoroughly pursued, with the CAA needing to test all avenues in order to achieve the best outcome possible for passengers.

However, it is also important to note that a commercial deal between the airlines and HAL (similar to that implemented at Gatwick during the last review) would potentially not be in passengers' best interests. HAL holds significant market with this unlikely to change over the period of time being discussed in this response. Hence it is highly unlikely that any commercial deal would reach favourable terms. Continued regulatory oversight is vital, particularly for an expanded airport.

The CAA consultation paper sets out (paragraph 3.6) what it considers to be the most important incentives and (paragraphs 3.7) how they are currently applied. For example, in terms of traffic throughput, commercial revenue maximisation, and operating expenditure (opex) minimisation, the opportunity for users to benefit materialises when the price cap is reset at the start of a regulatory period. At that time the regulator considers any efficiency savings that the regulated firm has realised and will set a revised cap accordingly. In this way, the firm's incentives during a regulatory period to outperform the targets implicit in a price cap lead ultimately to lower airport charges. Incentive-based regulation assumes that the price cap is only revised at the end of a fixed period, thus allowing time for the incentive to outperform the assumptions to take effect. The incentives for the airport to become more efficient are therefore greater if the regulatory period is longer, although the downside is that users have to wait longer to realise the benefits from any efficiency savings. The airport also bears all the risk of under- or over-performance against the price cap assumptions. We refer to this point again later in this response.

The CAA states that it sees *"no compelling case for changing the incentives for operating costs and commercial revenues"* but that *"there may be a case for strengthening the incentives for capital expenditure"*. We would agree with this view and comment further on incentives relating to capital expenditure later in this response.

Incentive Criteria

The criteria against which the CAA intends to consider how to set incentives are set out at para 3.11. These are:

- the extent to which HAL can be incentivised to seek out efficiencies that will benefit consumers in the longer term;
- the information available to set incentives, and the risks of creating incentives that would encourage gaming by HAL or might have undue costs for consumers;
- whether incentives can be implemented in a way that is reliable, relatively simple and transparent;
- the impact on affordability and financeability and, in particular, any significant impacts on HAL's cost of capital that would lead to higher overall charges for airlines and consumers; and
- avoiding (to the extent practicable) any significant impact on the volatility of airport charges, that might create difficulties for airlines and so affect passengers and growth in passenger traffic volumes.

We believe these criteria are on balance reasonable, but the CAA should also consider:

- the importance of considering affordability (prior to financeability) and the extent to which incentives could impact on airport charges; users have already made clear (and the CAA has acknowledged) the importance of affordability and the expectation that charges will be maintained at or near current levels during and after the capital expansion projects; we return to the issue of affordability later in this response;
- As part of the consideration of affordability, ensuring the right outcomes for consumers with the best design developed overall is also important; the CAA should also be incentivising that such scheme designs meet passengers needs whether it is designed by HAL or by a third party;
- the extent to which HAL's performance against incentives can be monitored (this goes to the point about information and transparency) so that the CAA can ensure that outcomes are aligned with affordability objectives;
- the balance of risk in setting incentives: users must not become the 'insurers of last resort'; we elaborate on risk-related issue further below;

Traffic Forecast Incentives and Cost of Debt

The setting of price caps is necessarily based on a set of assumptions and forecasts of traffic volumes. However, given the complexity of forecasting short-term demand, the process is open to regulatory 'gaming'. If actual traffic outperforms forecast (and assuming it can be handled without significant additional marginal cost) the airport could and indeed has in previous regulatory periods generated higher returns. Currently, the airport keeps all the benefit of increased traffic but also bears the risk of lower than forecast traffic. This has led in the past to consideration of volume risk-sharing arrangements built into the regulatory settlement.

Volume risk sharing operates at a selected number of European airports. For example, in Sweden, the Swedish Act on Airport Charges (2011: 866) provides the framework for regulating airport charges, although in practice these seem to be set by agreement between Swedavia and its users. Swedavia's traffic risk sharing programme was introduced in 2016 to handle traffic forecast deviations from the actual outcome for a specific year if they are greater than plus or minus 4% from the forecast. An adjustment to the charge per departing passenger is made based on an agreed discount value for each passenger over or under forecast¹. There is also a volume risk-sharing arrangement in the price cap that the CAA applied to National Air Traffic Services (NATS).

In the current consultation, the CAA also notes that it would be in the interests of users to retain a strong element of volume risk on HAL to incentivise it to make maximum use of new capacity². This is also consistent with the approach the CAA previously took in relation to Manchester Airport in 2003:

¹ Swedavia Airports, Price Decision on Airport Charges, January 2017.

² CAP 1541, Appendix B, paragraph B6.

“...in many instances it is desirable that Manchester be exposed to risks even though it may not have full control of those risks. For example, regulated airports have been traditionally faced with volume risk together with a cost of capital consistent with this risk, even though demand shocks can occur about which the airports can do relatively little in the short run. There are good reasons for this; it maintains strong incentives where airports may be able to grow volumes (through appropriate pricing structures, desired levels of outputs and service standards, innovative marketing of available facilities, or through the provision of additional capacity where it is required), and it avoids the perverse result arising under a volume term that where demand falls, the price cap increases. It is appropriate that airports face this risk (rather than transfer all the risk to airlines) given a commensurate cost of capital.”³

The CAR’s view in relation to Dublin Airport (DAA) is similar:

“As in past determinations, DAA will assume all the risks that outturns deviate from the numbers assumed in the building-block calculations. As IATA argued in its response to the Issues Paper, it would not be incentive regulation if DAA did not assume the risk of costs deviating from the levels set in this Determination. The same is true for commercial revenues. In the case of traffic risk, all parties supported DAA assuming all the risk of deviations from expectation, although DAA expressed reservations about this approach if we did not adopt its traffic forecast. Since passenger numbers is something that DAA has some control over, we think it is right that DAA have financial incentives to maximise traffic. We do not think that the rationale for assigning risks in this manner is undermined if we do not use DAA’s traffic forecast.”⁴

We support the CAA’s proposal to re-examine volume risk. In a non-expansion world, we continue to believe that volume risk is treated asymmetrically by CAA to the detriment of airlines and their passengers and to HAL’s benefit. Airlines pay HAL to take downside volume risk through the WACC and the adverse shock generator on the passenger forecasts. However, all of the upside is reaped by HAL. Airlines and their passengers will bear all the downside cost and reap none of the upside reward. We hold the view that either HAL bears the downside risk at no cost to us in return for the upside rewards, or that the airlines should continue to pay for downside risk, but reap the rewards of upside volume performance.

We also agree that the optimum approach is to ensure that volume forecasts are as robust as they can possibly be from outset to minimise the possibility of outturns being significantly different. There are a number of ways in which this can be done. One approach, for example, is the use of ‘Monte Carlo’ forecasting simulations to determine the probability of certain outcomes and reduce uncertainties. This is a technique recognised in the Government’s approach to investment appraisal⁵. A further important consideration in preparing and setting forecasts at the start of a regulatory period is the close involvement of and consultation with users. It will also be important to seek a wide range of independent views on forecasts for Heathrow. Different forecasters will have different views and use different techniques that as a whole will provide a rounded view of the market.

One area for potential further exploration specifically in relation to volume risk is around the impact of shocks. Clearly, shocks are by their nature unpredictable. However, it may be

³ Economic Regulation of Manchester Airport, 1 April 2003 – 31 March 2008, CAA Decision, March 2003

⁴ CAR CP1/2004 Draft Determination, para 2.12

⁵ Treasury Green Book, paragraph 5.73

worth considering whether some form of probability based assessment could be made on the likely regularity of shocks, their magnitude and their effect on Heathrow. This could provide some allowance for potential shocks over the control period.

Volume risk will inevitably rise with the introduction of new runway capacity and we note the CAA that it may wish to revisit the issue of risk sharing in relation to HAL's debt interest costs also.

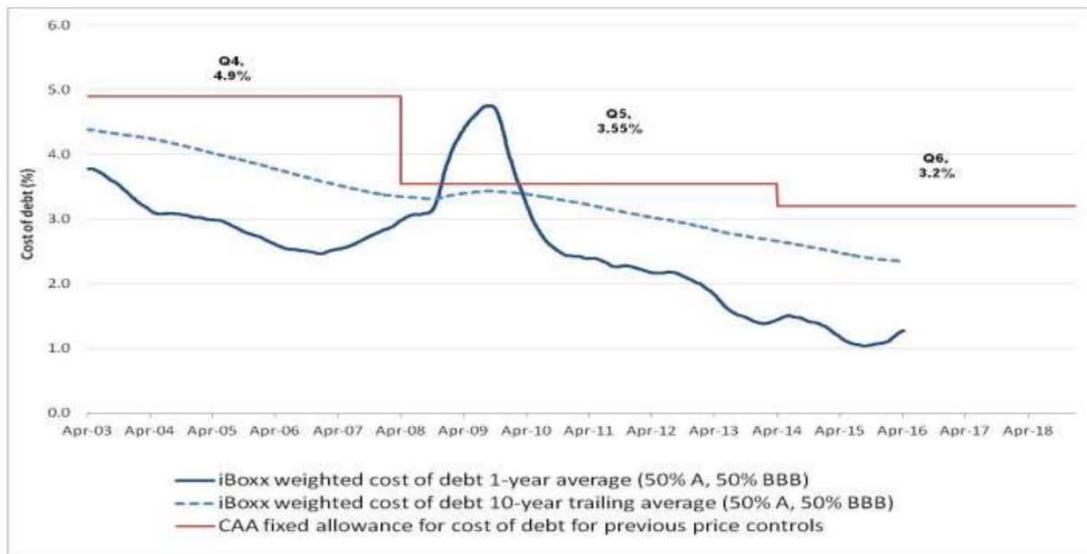
The cost of debt is currently set at a fixed rate for each quinquennium. The approach used by the CAA is to use a weighted average of HAL's existing cost of debt at the time of setting and a benchmark cost of debt to reflect the new debt (70% existing debt, 30% benchmark).

This, in theory, creates an incentive for HAL to seek out debt at a lower cost than has been assumed, allowing it to over-recover through the control period. In recent years, this has proven to occur. The cost of debt has fallen dramatically in the market generally and Heathrow has been able to fulfil its debt requirements at increasingly low rates. However, what needs to be considered is whether this is a reflection of efficiency or innovation by HAL or simply HAL taking advantage of a market trend. Given that the cost of debt in the market has fallen generally, it would seem reasonable to suggest that what has been seen is to a significant degree about the latter rather than the former.

It should also be recognised that seeking out the cheapest cost of debt is a normal practice for a profit maximising company. It is not linked to an arbitrary level set within the regulatory process. It is in the interest of HAL to take advantage of the current market conditions and lower its cost of debt. Lower cost of debt helps contribute to higher returns and profitability to shareholders. We would, therefore, question whether the cost of debt set within the regulatory process acts as an incentive in any way on HAL.

The CAA has raised the issue of cost of debt indexation as a better way to reflect the cost of debt in the regulatory process and to act as a more challenging incentive on HAL. The role of debt indexation and the effect on the WACC is considered further below. The CAA's research suggests that the use of debt indexation would have resulted in lower assumed costs of debt for HAL over recent control periods. This would have provided a more challenging target for HAL in seeking out efficient financing. However, again, we remain unconvinced that in reality, the regulatory assumption around the cost of debt has any real impact on HAL's incentives to lower its debt costs in practice. The incentives to minimise cost of debt already exist.

Overall, therefore we do not believe that there is an argument for switching to cost of debt indexation from a point of view of economic incentive on HAL. However, there is a strong case for change on the grounds of equity for all actors in the market. If the regulatory cost of debt is not acting as an incentive to drive efficiency from HAL, then what is assumed within the regulatory process should be as neutral as possible in its impact on different users. The present approach has led to airport charges at Heathrow higher than have been required for much of the last three control periods. Debt indexation would have provided a better reflection of the actual cost of debt and hence presented a more equitable solution.



Source: Promoting cost efficiency and financeability – CAA discussion paper, 20 April 2016

Incentives and Risk

The CAA re-iterated in its January 2017 consultation paper⁶ that one of its key principles on new capacity is that risk should generally be allocated to those parties who can best manage it (including both in operational and financial terms). This appears to be a rational approach and is also the approach taken by the CAR in relation to Dublin Airport:

“A guiding principle in past determinations has been that the DAA should bear those risks that it is best able to control. For example, it bears the risks associated with cost outturns deviating from those forecast at the time of a determination.”⁷

In response to the January 2017 consultation HAL has highlighted the increased risks it will face in the light of capacity expansion, in particular, greater volume risks, construction risks, higher debt costs, and political risks, and that these should all be considered in setting a risk-adjusted cost of capital. Risk has generally been approached by the CAA in the UK and by the CAR in Ireland through the setting of the appropriate WACC, which we address later in this response, and through the forecasting of individual building block components.

However, in the case of the significant capacity expansion being contemplated at Heathrow, there are perhaps other questions of risk to be considered in relation to capital expenditure. The concept of risk-sharing in relation to capex is not typically a feature of regulatory frameworks at other airports inside or outside the UK. A detailed review undertaken by Steer Davies Gleave for the Irish CAR in 2014⁸ did not identify any evidence of this practice in

⁶ CAP 1510, paragraph 5.4

⁷ Commission for Aviation Regulation CP/2013

⁸ A review of regulatory decisions in relation to cost-risk sharing of capital projects, SDG for CAR, 22 September 2014

other sectors. However, we address the question of risk as it relates to efficient capex and associated incentives later in this paper.

Control Period and Re-Opener Mechanisms

The Civil Aviation Act 2012 provided flexibility for the CAA to vary the duration of price control periods; the default period is still five years, but Gatwick (for example) has licence backed commitments that last seven years. Longer regulatory periods also exist in other regulated sectors ranging from 2 to 10 years⁹.

The CAA considered the potential benefits and disadvantages of changing the length of the regulatory period in its Discussion Paper of June 2014¹⁰. Airline responses to this at the time were open-minded, acknowledging the potential pros and cons. We set these out in Table 1 below.

⁹ Several examples are given in 'The Duration of Price Controls: to change or not to change?' Northumbrian Water, 2015.

¹⁰ Discussion paper on the regulatory treatment of issues associated with airport capacity expansion, CAP 1195, June 2014

Table 1: Potential benefits and disadvantages of changing the length of the regulatory period	
Potential Benefits	Potential Disadvantages
The incentives for an airport to become more efficient during the course of a regulatory period are greater if the period lasts longer, as greater savings can be realised by the airport before the price control is adjusted at the end of the period.	Forecasting of the regulatory building blocks, a key feature of the current approach, would become even more important with a longer regulatory period, and the risks of getting forecasts wrong would increase.
Airports may be encouraged to take a more long-term 'strategic' approach to efficiency incentives with a longer period.	Users may have to wait longer before the price control is re-set to realise the benefits from any efficiency savings generated by the Airport.
By extending the price control over a longer period of time and thus providing greater surety about potential changes, airport operators and airlines may be exposed to lower financing risks and lower costs of capital than might otherwise have been the case.	Lower throughput than forecast over a longer period could increase the risk that the airport is unable to finance its expansion, or if throughput is higher than forecast, airports could make much greater profits than envisaged at the start of the period.
A longer regulatory period would reduce the regulatory burden and cost associated with more frequent price control reviews	There could be greater risk or having to re-open reviews with the associated costs involved.

In our view, there is potential merit in continuing to evaluate longer regulatory reviews, especially in relation to considering how significant new additional capacity is to be remunerated. However, the potential dis-benefits listed in the Table above would all have to be addressed if longer periods were to be implemented, to ensure further risk is not transferred back to the passenger.

Interim reviews can guard against unexpected circumstances, but clearly the advantages of extending the regulatory control period would be negated if there was a need to increase the frequency of re-opening the price control. Placing reliance on the possibility of interim reviews could undermine any benefits of a longer regulatory period. In other words, the threat of interim review could have the same effect as actually having a review by damaging the incentive effect of the longer period.

Furthermore, setting criteria in advance that might justify re-opening a price control would inevitably be difficult. For instance, although airports could be exposed to unexpected demand shocks, there are a range of ways in which they might be expected to respond (as we have noted above in relation to volume risk), such as pricing discounts, innovative marketing initiatives, and opex reduction, before a re-opening of the price control became necessary. We view the idea of setting caps or collars around particular variables to be somewhat impractical as the level of these measures would ultimately be purely arbitrary.

Thus, although the CAA is required to consider applications for interim price cap reviews against its statutory objectives, we believe that interim reviews should only be envisaged in genuinely exceptional circumstances lest the incentive effect of the control period be undermined. Therefore, in scenarios where the price control period has been extended

beyond five years. However, this position would need to be revisited when the approach to capital expenditure is further clarified.

We share the same objective as the CAA in that Heathrow Airport should operate, maintain and be developed in an economical and efficient and timely manner. However, it is important that any clause raised in this licence does not impede any third parties from offering or developing the airfield in an alternate manner. While, the licence appropriately acts to ensure HAL is not exploiting its significant market power, it is also important that involvement of third parties isn't impeded in the delivery of Heathrow expansion

The Efficiency of Capital Expenditure and Associated Incentives

Heathrow should be incentivised not to overspend on capex relative to the initial forecast, because additional costs will not be remunerated until the RAB is reviewed at the next period and, if deemed to be inefficient, could be disallowed. However, there is some incentive for the airport to potentially 'gold plate' capex if it believes it will be allowed into the RAB and thus earn a higher return. In this sense, regulation incentivises the *quantity* of capex, rather than its *quality* or *efficiency*, although this can be mitigated to some extent by prior consultation with users ('constructive engagement') and by the risk of inefficient expenditure being disallowed by the regulator. There is a further incentive for the airport to delay capex until the end of the period as this will have no effect on the price cap during the period and so could improve cash flow. This can be mitigated by the use of capex 'triggers', which takes into account the point in time when capital spending results in the opening or use of a new facility.

Effective engagement with users and governance lies at the heart of the efficient planning, management and review of capital projects. In addition we have welcomed the establishment of the Consumer Challenge Board in providing independent scrutiny and challenge to HAL on the development of its business plan.

Whilst the introduction in Q6 of the concept of 'core' and 'development' capex was welcomed, along with new governance arrangements, it is regrettable that the CAA's Interim Report on the progress of airport-airline engagement on new runway capacity of May 2017 notes that a number of airline concerns, especially in relation to communication and information provision, affordability, and timetable, remain to be addressed. Addressing these concerns will be key to ensuring an efficient CAPEX plan is to be developed.

Incentives for the airport to deliver below cost should remain within the regulatory assumptions, but not at the expense of quality or timing. The CAA should, therefore, have regard to this risk during the regulatory period. Capital triggers appear to be an effective way to mitigate the risk of the adverse timing of delivery and have been used previously by the CAA (e.g. in relation to T5) and by the Irish CAR (in relation to T2 at Dublin) as an effective means to control the increase in the RAB over time. Although the introduction of some form of 'ex-ante' approach to the estimates of capex could be beneficial (see below), the ex-post reviews by the CAA should remain and should be robust in disallowing inefficient capex from entering the RAB.

The CAA's April 2017 Guidance to HAL (CAP 1540) is helpful in signposting the way in which HAL should approach the preparation of its Business Plan, for example in the use of benchmarking studies to ensure that costs are within an appropriate range and are in

customers' interests. The CAA should also commission or undertake its own benchmarking, rather than relying on the benchmarking studies presented by HAL alone.

There are also potential lessons to be drawn from the Stansted G2 experience, where BAA incurred significant expenditure on the basis of the 2003 Government Air Transport White Paper, which identified Stansted as the airport where new south east runway capacity should be built "*as soon as possible*". Despite this (then) Government policy support for new capacity at Stansted, the expenditure on preparatory work for a new runway was highly contentious and airlines disputed the necessity and efficiency of the majority of the costs. Equally, there was no clear guidance from the CAA on how the investment would be treated in regulatory terms. Although some of these costs were eventually excluded from the RAB, airlines had to pay higher charges to reimburse Stansted for capital investment that they had protested against and which ultimately provided no benefit to users. Although the political risk of a change in government policy cannot be easily allowed for, the experience at Stansted serves to emphasise the importance of user engagement and support for all expenditure in relation to major capital projects.

It is also important to re-iterate in this context the concerns about pre-funding of planning costs associated with a third runway, as raised previously in connection with the CAA's consultation (CAP 1469) on the regulatory treatment of these costs. It was previously noted that the CAA's premise that some degree of pre-funding is either necessary or desirable to incentivise the airport operator to seek planning permission is unwarranted and implies that users should effectively 'loan' money to HAL, on which they should see a return. Such pre-funding commitments were not made in relation to a second runway at Manchester, nor in relation to Dublin's Terminal 2 or proposed second runway.

Ex-ante Capex Incentives

The current 'ex-post' approach taken by the CAA has not varied and is the same as that which was adopted by the Irish CAR and moving towards a full or partial 'ex-ante' incentive approach is without regulatory precedent in the airports sector, as far as we are aware.

The increased use of an 'ex-ante' approach could bring both benefits and disadvantages:

- this could bring greater regulatory certainty and increase the incentive for the Airport to 'come in under budget', however, there could also be some incentive for HAL to compromise quality to meet the incentive target;
- there is a strong incentive on all parties in the process to engage fully and to produce a plan that is efficient and affordable as there is no course for redress in the case of over or under spend;
- the further complexities of setting capex 'ex ante' such as the process of determining which costs should be fixed in this way and which should not, the difficulty in fixing expenditure estimates for long run complex projects, the incentive share of the potential risks, and the possibility that this approach could introduce some regulatory gaming, all suggest that this issue needs further careful consideration;
- it would provide long-run certainty for airlines in terms of what they are funding and for what. However, it should be recognised that the 'for what' is central to any ex-ante process being effective to ensure that HAL delivers on the quality of service required.

There are also two further points as regards an ex-ante approach that need to be considered:

- by setting the capital allowance at the outset with no course for redress, some party at some point must bear the risk of cost overrun from the outset. This should sit with HAL and not the airlines;
- an ex-ante regime will only work if there is no course for redress. The capital expenditure elements that are fixed must actually be fixed and not subject to any form of reopening. Otherwise, the beneficial effects of ex-ante incentives will be lost or at least diluted.

We note that the CAA intends to undertake further work in this area and we look forward seeing this. It is important that this assessment takes place as soon as practicable. On balance, it may mean that elements of both 'ex-ante' and 'ex-post' components should be utilised. Whatever the mechanism chosen, it is important that there is improved consultation and governance arrangements, and regulatory oversight during this process.

Affordability & Financeability

The importance of affordability for the consumer cannot be stressed strongly enough, and we have been clear about this from the outset. Underpinning all efforts on efficient financing of new capacity should be affordability and maintaining flat charges, while aiming towards a reduction in charges over the longer term.

We indicated in our response to CAP 1510 that while we have welcomed HAL's early indications on affordability, we were disappointed by the lack of progress that has been made on this to date, particularly with the lack of development of a robust 'affordability protocol'. Such a protocol needs to underpin every aspect of this process from scheme design to surface access arrangements, and it is vitally important that this is developed and jointly agreed as soon as possible. We were particularly concerned that design work and optioneering was underway without any agreed affordability parameters in place.

In the Interim Report to the Secretary of State on the progress of airport-airline engagement on new runway capacity of May 2017, the CAA noted:

"It is imperative for HAL and the airlines to have a detailed, well-informed and mature dialogue around the impact that expansion will have on the affordability of airport charges. HAL must assist this process by making available to airlines sufficient information and assumptions so effective discussions can take place.... While we welcome the steps that HAL has taken we consider progress in this area must be significantly stepped up."

This statement was very much welcomed and is therefore a critical area of concern that needs to be addressed as a matter of urgency.

The Importance of the WACC

We note that the CAA has commissioned PwC to undertake work on a preliminary estimate of HAL's likely cost of capital and that this work is likely to be published towards the end of 2017. It will be important to reserve judgement to a significant degree on issues relating to

the calculation of the WACC depending on the conclusions of this study and the CAA's response.

Nevertheless, we would still like to make broader points in relation to the WACC without necessarily attempting to anticipate the calculation in detail.

The CAA clearly recognised the importance of the WACC in terms of its effect on airport charges at the outset of the current price control period:

*"The CAA's judgement about where in this range it should set its assumption has been informed by many factors. The CAA recognises that there are risks to passengers in how it sets the WACC within a given range. If it sets too high a WACC, passengers may pay more than may be necessary to reward capital providers. However, setting a WACC too low would mean that HAL was unable to raise sufficient capital to modernise and upgrade its facilities in the long-term interests of passengers."*¹¹

In our view there are three main areas which will be of importance for consideration here:

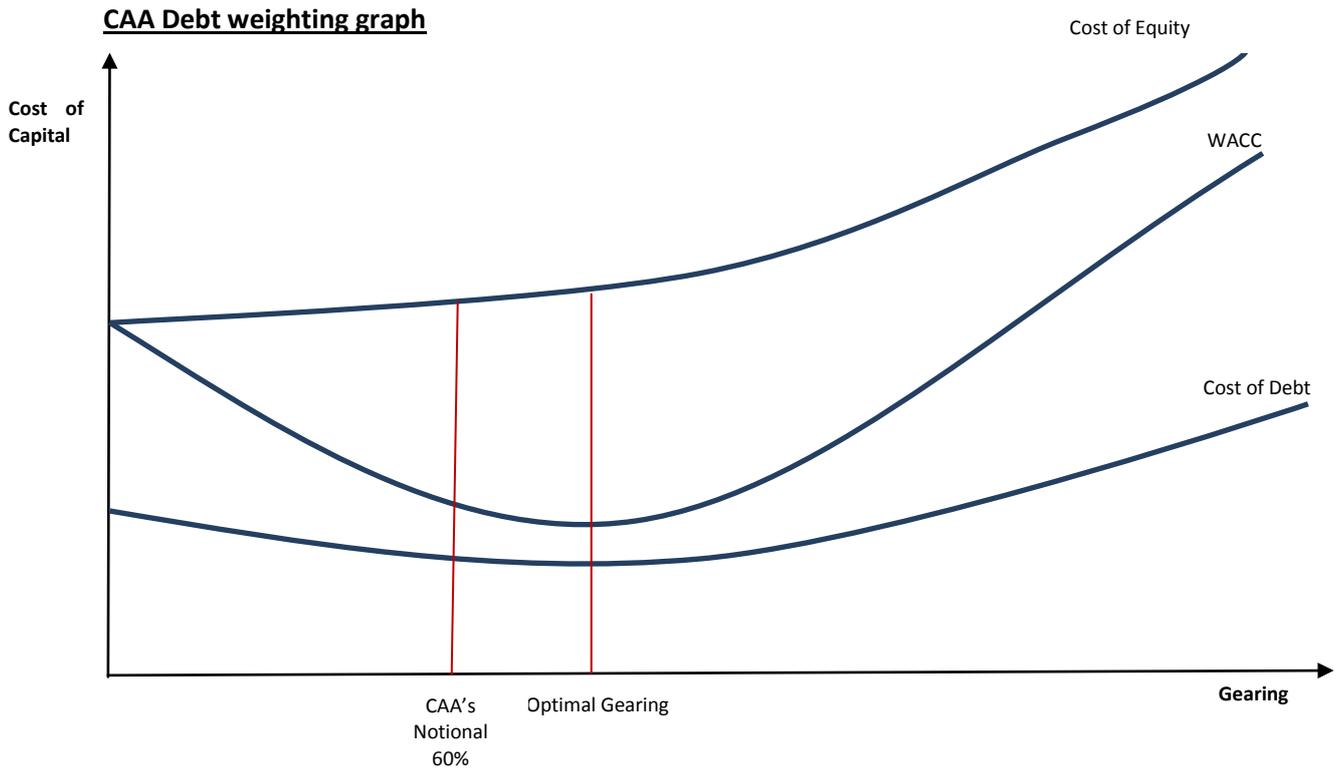
- the level of gearing assumed by CAA and Heathrow's cost of debt;
- the influence of debt indexation;
- the existence of increased volume risk.

Gearing Assumptions

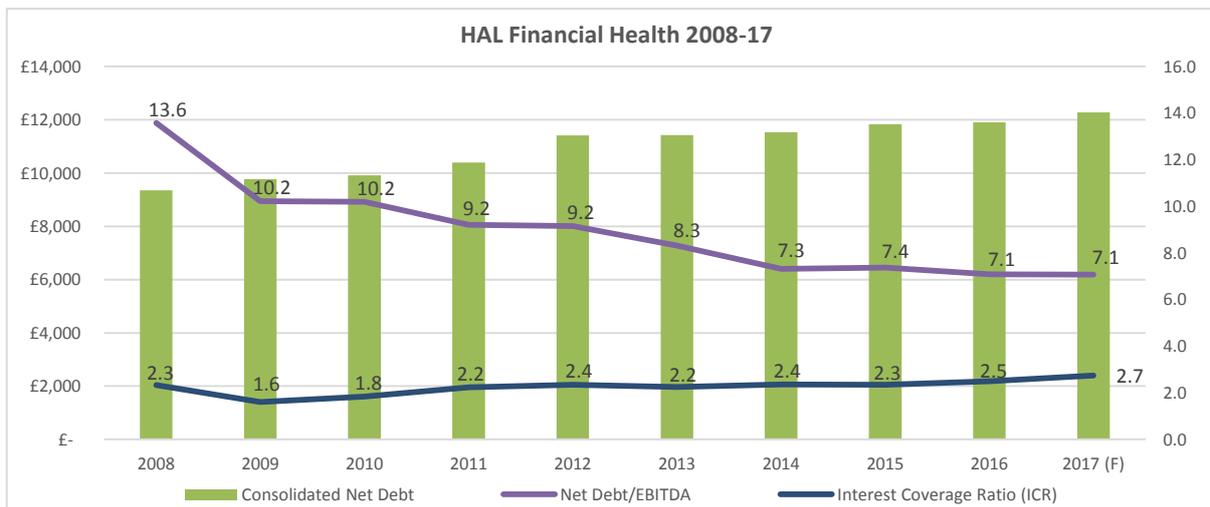
Given the recent decline in the cost of debt, it is now open to question whether the 60% gearing assumption has been adopted remains correct. Particularly as HAL's ability to continue to raise debt and service this debt at what are in reality substantially higher gearing ratios.

However, in our view with recent changes in the cost of debt and with HAL's risk profile, 60% may be too conservative and that in reality the bottom of the WACC curve is at a higher level of gearing (see chart below). In this scenario, there is room for a higher gearing assumption associated with a lower WACC or a higher gearing ratio with no significant increase in the WACC without raising concerns around the long-term financial sustainability of HAL. In the context of the third runway and Heathrow's recent comments that a higher WACC is likely to be required given the potential need to take on more debt and the potentially increased risk profile associated with the development of the third runway, this is clearly important.

¹¹ CAA Q6 Initial proposals April 2013, para 43



HAL's recent performance would support this view that 60% is conservative. In practice HAL does not currently experience any issues in raising finance or covering its debt interest payments at a gearing of 85%. Additionally, HAL's financial health (as seen in the charts below, the Net Debt/EBITDA Ratio and Interest Coverage Ratio) is only improving the more it borrows, without showing any signs of financial distress.

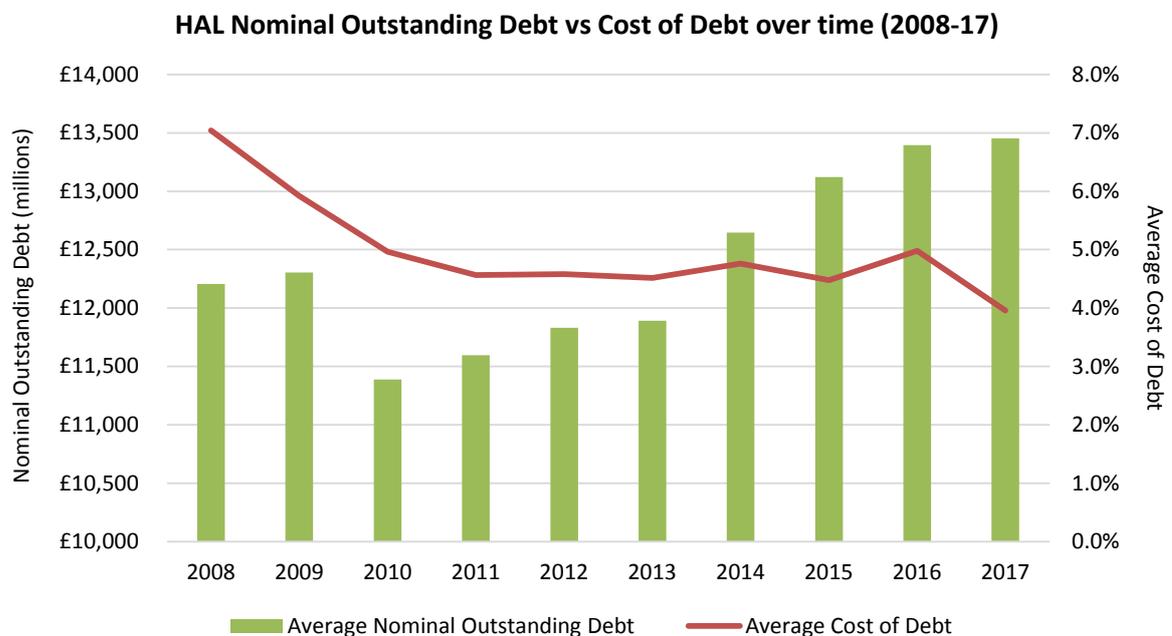


In addition, it is also important to note that one of the CAA's key concerns is that HAL should maintain its status of 'Investment Grade' in regards to its credit quality and ability in raising new additional debt. It is also important to note that throughout this time HAL maintained its 'Investment Grade' despite the increasing amount of debt with HAL's credit rating having stayed consistently around the upper medium grade within the investment grade quality (2008-2017).

Also, HAL has recently raised debt at very low rates of interest:

- January 2016: CHF 400m, 8yr bond at 0.5%
- June 2017: €500m Eurobond up to 2032 at 1.875%, HAL also received significant demand for this transaction with an order book of around €1 billion (twice the required amount) from over 60 institutions globally.

The more recent bond issuance indicates the current risk perception of HAL amongst lenders across the world and the ease at which HAL can raise debt finance in current market conditions. Over the last 10 years, Heathrow has continued to increase its debt but at the same time the average cost of Heathrow’s debt has continued to fall. This is despite increased volume risks, political risks, construction risks. Furthermore, we would question whether HAL’s risk profile would result in a rise in the cost of debt sufficient to warrant a dramatically increased WACC, particularly if a more efficient gearing assumption were to be adopted.



The Influence of Debt Indexation

We have noted the CAA’s current use of the capital structure mix of a ‘notional airport’ rather than the actual financing mix of HAL, assuming that the actual capital structure is a matter for HAL and its shareholders only. Given this ‘notional’ approach, it would be more appropriate to use debt indexation given its use as a defined benchmark of the ‘notional’ debt that companies face in the current changing market conditions.

However, a much more thorough investigation with regards to adopting an appropriate benchmark would be required. Previous studies by CEPA, NERA & PwC have focused more on the methodology of the indexation process rather than giving a general overview of the benefits or disadvantages of using it. These studies suggest that great care needs to be

taken in using indexation on the benchmark bond yields. There are potentially significant complications in practice along with potentially the creation of a new benchmark.

On balance, there is a clear case for continuing to explore options around debt indexation, and we would welcome further work on this.

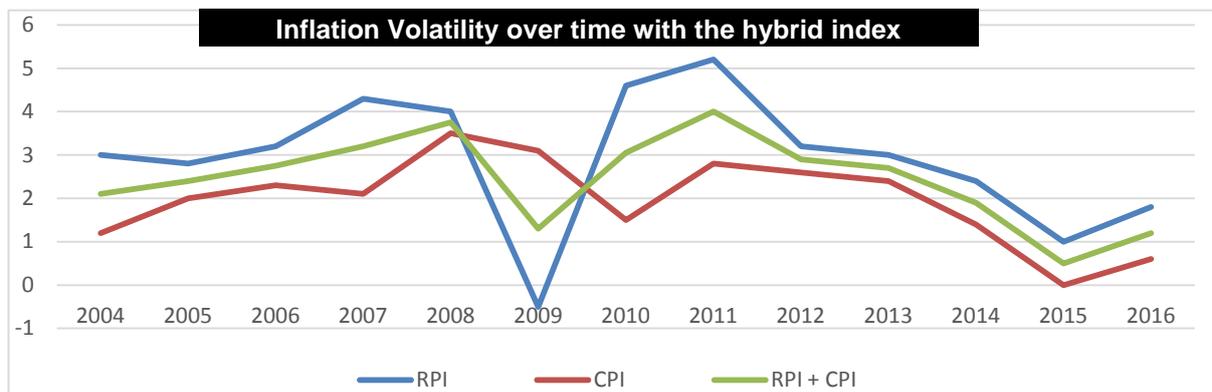
Inflation Measures

We note the ambition from the IFS to Government and regulators to work towards ending the use of the RPI as soon as practicable and understand where they decide to keep using it the UK Statistics Authority may ask them to set out their reasons for doing so.

While we understand that there are both are pros and cons to a switch to CPI in terms of affordability. Given the lower standard deviation, in our view there is likely to be less volatility in airport charges if the CPI measure were to be used. However, we also note the potential short-term affordability impacts from the use of CPI potentially leading to a rise in charges, albeit with a potential smoother, lower nominal price profile over the longer term as indicated in other sectors.

It is also helpful to highlight the move by Ofwat who are introducing a ‘half and half’ transition measure of $(0.5 \times \text{CPI}) + (0.5 \times \text{RPI})$ from 2020 onwards with an increasing weight to CPI over time and we feel that any change from RPI to CPI should be done using some form of transition mechanism rather than a sudden change. This again could aid a smoother shorter and longer-term pricing profile.

The graph and table below illustrates that the hybrid inflation fluctuates with a standard deviation of 1.02 far below that of the pure RPI measure of 1.53. This indicates that even the hybrid inflation measure, would reduce the inflationary risk on airport charges currently observed by using the RPI measure.



Inflation Index	RPI	CPI	RPI + CPI
Standard Deviation	1.53	0.99	1.02

We would like to explore both a direct move to CPI or hybrid measure, along with short and longer-term impacts for said transition period in more detail given the number of variables and sensitivities involved in this process.

Overall, in relation to financeability, there also appears to a case for a move towards a CPI-based regime. However, this needs to be balanced against the possible short-term downsides in terms affordability.

Surface Access

Unlike other transport modes, UK aviation does not rely on Government funding to finance new infrastructure developments or to support operating costs. It is worth also noting that we have the highest Air Passenger Duty (APD) in the world, along with the highest airport charges at Heathrow. With this in mind, we support the funding of surface access infrastructure when solely required to deliver airport capacity.

Just as the economic benefits of increasing capacity at Heathrow will be shared between the airport, airlines and wider UK economy, so too should the costs of surface access. This is particularly the case when such works will go much broader than associated with the development itself. Our view is that both the National and Local Government will have a vital role to play in delivering this infrastructure alongside the airport and ultimately airlines and our passengers.

Heathrow should also not be allowed to make further commitments to specific surface access schemes prior to engagement with the airline community.

Timetable and Extension of the Price Control

We continue to support the proposals for a further extension of the Q6 price control period and provide further time to engage in work associated with expansion.

While we note the CAA's view that any further rollover should be kept simple, given the disparity between forecast and actual passenger traffic it would in our view be sensible to focus on this particular building block, which is probably the most important. This is supported by work undertaken by the Irish CAR, which noted that not all building blocks are equally important¹². It found that in both the 2005 and 2009 regulatory reviews the calculations underlying the price cap were most sensitive to changes in passenger numbers and operating costs.

High-level analysis of the building blocks used in the Q6 price control for HAL(Table 2 below) illustrates the effect on the price control (in terms of allowed revenue per passenger) of varying each building block by 10% from the starting values used by the CAA in the Q6 price control.

¹² Maximum Levels of Airport Charges at Dublin Airport, Issues Paper 2/2013, July 2013, page 14.

Table 2: Effect of varying building blocks on the allowable yield at Heathrow for Q6

(£ millions)	Actual Q6	Opex plus 10%	Deprec plus 10%	Cost of Capital plus 10%	Non-Aero Revenue minus 10%	Pax minus 10%
Opex	£4,731	£5,204.1	£4,731	£4,731	£4,731	£4,731
Depreciation	£3,113	£3,113	£3,424	£3,113	£3,113	£3,113
Cost of Capital	£3,489	£3,489	£3,489	£3,838	£3,489	£3,489
Total revenue requirement	£11,333	£11,806	£11,644	£11,682	£11,333	£11,333
Commercial Revenues	-£2,790	-£2,790	-£2,790	-£2,790	-£2,511	-£2,790
Other Regulated charges	-£1,004	-£1,004	-£1,004	-£1,004	-£1,004	-£1,004
Other Revenues	-£675	-£675	-£675	-£675	-£675	-£675
Net Revenue Requirement	£6,864	£7,337	£7,175	£7,213	£7,143	£6,864
Passengers (millions)	347.7	347.7	347.7	347.7	347.7	312.9
Allowable yield per pax	£19.74	£21.10	£20.64	£20.74	£20.54	£21.93
Increase in allowable yield		6.9%	4.5%	5.1%	4.1%	11.1%

Source: Economic regulation at Heathrow from April 2014: Notice granting the licence (CAP 1151)

Based on this analysis, we do not agree with the CAA that focusing on the passenger throughput variable, as opposed to other building blocks, would be arbitrary. In very broad terms and assuming passenger growth at Heathrow of around 1.5% per annum through 2018 to 2020, this may result in a regime of RPI -4% in 2019 and RPI -1.5% in 2020.

A roll forward of the price cap at RPI-0%, while simple is entirely arbitrary and it is not reflective of what has actually happened in Q6 (i.e. higher than forecast passenger traffic and lower than forecast debt costs).

Therefore we continue to support the idea of extending the price control by a further year beyond the current Q6+1 period in order to better align the price control timetable. It is vital this is balanced against resource requirements for the expansion timetable. It is also in our view vital a decision is taken on this as soon as practicable.