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DAA Response to CP2/2013

Maximum Levels of Airport Charges at Dublin Airport

Issues Paper

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1. Introduction and Overview

DAA welcomes the opportunity to respond to CAR's Issues Paper – Maximum Levels of Airport Charges at Dublin Airport, CP 2/2013, 31.07.2013.

CAR's Issues Paper references a number of different perspectives and alternative approaches on given aspects of the regulatory model, which DAA found helpful. While there are certain assertions made with which we would disagree (see below), overall the Issues Paper represents a good starting point for the regulatory process that will culminate in CAR's Final Determination, due to be published in September 2014, governing airport charges from 2015-2019 (assuming the Determination duration remains unchanged).

The structure of DAA's response is as follows:

- 1. Introduction and Overview
- 2. Approach to Regulation
- 3. Customer Focus
- 4. Volume Forecasting and Volume Risk
- 5. Capital Expenditure and Capital Return
- 6. Capacity Constraints and Peak Pricing
- 7. Financial Viability
- 8. Commercial Revenue
- 9. Operational Efficiency
- 10. Other Issues

Key points of response are summarised in this introductory section.

1.1 National Aviation Policy

While it is unlikely that any legislative changes to the regulatory framework arising from the current process of producing a National Aviation Policy (NAP), or from subsequent work, would be in place in time to affect the next Determination, the NAP is relevant to its formulation. The NAP would be expected to give clear emphasis to aviation objectives and means of achieving them which could be directly pertinent to matters under discussion in the Determination process, e.g. the importance to the sector itself and to the wider economy of enhanced aviation connectivity, the role of airport infrastructure in supporting competition and connectivity, the importance of efficient and flexible infrastructure provision, etc. It would be appropriate, therefore, for the Determination process to reflect such policy considerations in a transparent way once they emerge, and it would be helpful for CAR to comment at this stage on how it would foresee incorporating such considerations.

1.2 Airport Charges Directive

In its discussion of the regulatory environment, the Issues Paper also highlights the European Airport Charges Directive (ACD). This has now been transposed into Irish law, and

DAA has twice consulted on and amended airport charges under this new regime. One of the most striking features of the ACD from an Irish perspective is that the level of regulatory intervention envisaged is less micro-managing, and far quicker in terms of process, than the pre-existing domestic model of regulation. While the process for the next Determination is already set out, it would be open to CAR within the existing framework to move to a less interventionist stance, for instance in the setting of capital allowances.

1.3 Countervailing buyer power

The need for regulation is predicated on the existence of market power. The process should also be frank about the considerable countervailing buyer power which DAA faces through having two market-powerful customers, accounting currently for circa 84% of DAA's business. The regulatory process should proceed with an awareness of the risk that regulatory outcomes may be unduly dominated by the private interests of these companies, which in turnover terms and in communications presence are bigger or far bigger than DAA. The objective of regulation is to replicate competitive-market outcomes in so far as possible, i.e. to avoid monopoly outcomes. In the case of DAA, there is a strong argument that regulation has swung too far in the opposite direction. The capital remuneration of T2 is a case in point, offering a return structure that no competitive-market firm or privately-owned regulated utility would find acceptable.

1.4 Incentive-based regulation

DAA is not opposed to incentive-based regulation, once the benchmarks are set fairly on the basis of rigorous, evidence-based analysis, within a process where DAA has adequate opportunity to review and comment on such analysis (where it is conducted by a third party) and where the process demonstrates reasonable responsiveness to evidence-based counter-assertions. In fact, DAA is supportive of further developing incentive regulation through increased use of rolling-efficiency incentives for both opex and commercial revenue. There are two necessary conditions in order for an incentive to be real and positive: (i) The regulated entity has to have some meaningful control over the variable in question; (ii) There has to be a realistic possibility of achieving upside relative to the Determination forecast.

1.5 Customer focus

DAA is a customer-focussed organisation and is committed to improving the service experience of all customers. The regulatory Determination offers an opportunity for formal integration of customer service performance into the pricing structure and DAA welcomes this. Generally speaking, DAA has performed excellently against the 13 service quality metrics incorporated into the price cap, and we believe that this is reflective of the high level of service generally provided by DAA to our customers. Dublin Airport has now scored in the top five European airports in 6 out of the past 8 quarters¹. However, there has on

¹ ACI ASQ 2011-2013

occasion been difficulty in one area, namely security queue length in T1. In line with this difficulty, a number of failures were recorded against the security-queue metric in the latter part of 2012 and the early months of 2013.²

The issues involved in security are challenging, including complex compliance requirements and significantly changed customer behaviour (with more online check-in leading to lumpy arrival of customers at security, and increased hand-baggage due to airline baggage charges). DAA has instituted a range of measures to address the difficulties, including improved lay-out, better communication with customers and the recent addition

security staff. Progress has been made in improving customer service levels, but the challenge will continue, including, for example, the introduction of new security treatment for liquids and gels from January 2014.

In DAA's view, the Determination process should review the set of customer service metrics to ensure that they are the right metrics, the ones that matter to customers, both airlines and passengers. It is important also that the cost of service provision (quality performance) is accounted for in such a review process. It will ultimately be the responsibility of CAR to determine the metrics/targets which will impact the price-cap. However, DAA proposes – in the period between now and the draft Determination – to arrange an iterative engagement with its airline customers with a view to finding common ground on the future set of metrics, as an input to the regulatory process. Such an engagement may affirm the existing metrics. DAA is also open to the possibility that new metrics and/or a different prioritisation of metrics could emerge. It is DAA's intention that this engagement would provide opportunity to focus on operational priorities and to understand preferences in any servicecost trade-off. It will be important too to consider how best the set of metrics can be adapted over time to reflect new developments and changing requirements. Within the context of such a discussion, it would also be appropriate to look at performance metrics for stakeholders other than DAA, since the airport is a community of operators and the efficiencies/inefficiencies of each party can affect others, as well as the ultimate customers the passengers.

In the coming months, DAA will bring forward a concrete proposal and timeline for the envisaged engagement with airlines. The output from the process would be submitted to CAR in advance of the draft Determination.

1.6 Volume forecasting and volume risk

DAA welcomes CAR's open discussion of the difficulties involved in volume forecasting as well as the recognition that DAA is bearing the brunt of the over-forecast in the last Determination of passengers for the period 2010-2014. After only three years of the Determination, the over-forecast has led to a DAA revenue loss (relative to the counterfactual of an accurate forecast) of \notin 36m. Nevertheless, for a number of reasons,

² DAA also recorded two failures (one in each of 2011 and 2012) by reference to the target for internet access/WiFi provision and security queue duration. Following a detailed internet access/WiFi usage and attitude study among Dublin Airport passengers, an improved, free WiFi proposition was agreed and implemented with the third party service provider.

DAA does not seek to move to a system of risk-sharing in regard to passenger outturn versus forecast. DAA believes that it is better to minimise complexity within regulation, that it is important to promote incentive structures, and that increases in airport charges as a response to outturns being lower than forecast would be likely to be unpopular with customers, would potentially be commercially unachievable and as a result could in turn lead to further asymmetric risk.

DAA believes that the responsibility for passenger forecasting for the regulatory Determination should rest with DAA itself. DAA believes that it would be inappropriate for CAR to continue with its current one variable model, but also that it would be inefficient for CAR to seek to undertake a more detailed forecasting approach itself. DAA currently has a consultation underway with airline customers on this topic, transparently explaining our methodology and inviting forecasting input from airlines (as envisaged under the ACD). At the conclusion of this immediate process, DAA will publish an Initial Range Forecast which – subject to later refinement, as necessary – it will propose as the basis for the regulatory Determination. In order further to allay any concern that DAA's forecasts may be biased³, we propose that the forecasts themselves would be subject to review (as to methodology, parameter values and assumptions) by CAR or its appointed expert in advance of the Determination.

1.7 Flexibility to maintain and develop the airport

DAA advocates that it should have increased autonomy/flexibility in regard to capital spend. This would not necessarily mean higher capital spend overall, but flexibility for DAA to manage and develop the airport in a responsive, enterprising and forward-looking manner, without undue regulatory risk with regard to the remuneration of capital, and without unrealistic reliance on unanimous support from current airport users for individual projects that arise between determinations. While it is understood that users and the regulator wish to assure themselves of the efficiency of capital spend, it does not appear that the best route for this is to have detailed engagement by the regulator in the specification of individual capital projects. Appropriate oversight could be achieved through other mechanisms.

CAR has made a move toward increased discretion for DAA through setting grouped capital allowances for the 2010-2014 Determination. This was definitely a first step in the right direction, but it will be important to see how the reconciliation works in practice. In particular, the point of creating an envelope of capital spend would be undermined if the reconciliation was to be conducted at the level of the individual project within the envelope. DAA's experience leads us to recommend that larger envelopes be allowed for general categories of spend, e.g. general operations capex, and that new envelopes be created, e.g. commercial revenue maintenance and development – for which there is no general allowance at present. DAA will make more detailed recommendations in this regard in our regulatory proposition submission.

³ This is clearly not the case given that the forecasts are based on objective analysis and a methodology that has been developed over time and the same forecasts are used internally by the company for business planning.

1.8 Opening RAB 2015

With regard to the opening RAB for 2015, DAA submits to CAR that it should allow the full amount of the capital expenditure on T2 and T2 Associated projects. There are two sets of considerations here.

- Firstly, that CAR's quantification of the overspend is misstated, as a consequence of (i) an original unjustified disallowance of an element of the projected cost and (ii) a treatment of inflation that fails to account properly for construction sector inflation and the way in which such inflation is managed in large-scale construction projects.
- Secondly, that CAR's principles for the admission of capital overspends into the RAB are unduly restrictive and represent an outlier in terms of regulatory practice. This contention is fully supported by the findings of two Appeal Panels. In particular, DAA would emphasise that construction overspend risk is not covered within DAA's allowed WACC.

1.9 CIP 2015-2019

Looking forward, DAA intends that CIP 2015-2019 will be clearly responsive to the requirements of existing customers and facilitative of growth. As part of our preparation process, we plan to organise a programme of capex consultations, to take place in December 2013 / January 2014. It is DAA's view that this consultation process should obviate the need for CAR to conduct a separate capex consultation process later in 2014, and we will seek to liaise with CAR to ensure that the programme proposed by DAA meets CAR's process requirements. DAA would anticipate that CAR – at a minimum – would be an observer in this consultation process.

1.10 Capital remuneration

With regard to return on and return of capital, there are numerous and important issues to be addressed in the Determination. Given the complexities involved and the specialised nature of the analysis, DAA believes that CAR should appoint an independent third party to report to it on the weighted average cost of capital. DAA's expert advice in this matter has pointed to a number of short-comings in CAR's last analysis, in particular the lack of adjustment of the risk free rate to reflect Irish country risk. The clear trend in regulatory decisions in Eurozone countries where sovereign financeability has been compromised or threatened has been for a country risk premium to be incorporated in the risk-free rate. This was observed also in the most recent relevant decision by the Irish CER, and CAR should follow this precedent. Other issues with regard to the cost of debt, appropriate beta comparators, and internal consistency in the WACC calculation are discussed in detail in the paper.

DAA welcomes CAR's openness, signalled in the Issues Paper, to re-examining the remuneration policy for RAB assets. The most pressing case is the one of T2. There is no guaranteed return in incentive regulation, but generally speaking it is achievable for the regulated entity to make or exceed its allowed return if it meets its efficiency targets, revenue targets, etc. By contrast, in the case of the regulatory regime which DAA faces,

even if DAA exactly achieved all expenditure, revenue, service quality and capex projections etc., there is a structural impediment in the regulation to the achievement of the full return within the year or indeed within the regulatory period – namely the depreciation treatment of T2. The impact of this treatment can be seen in the published Regulatory Accounts, which indicate that the regulated entity made a profit before exceptional items of €3.5m in 2012 and a loss of €0.4m in 2011. The return earned on the RAB in these years was 3.6% and 3.4% respectively, which is half the allowed return. For the regulated entity, the key funding metric of FFO:Net Debt is below 10%. This is consistent with a sub-investment grade credit rating, and in fact the financeability of the regulated entity is reliant on the financial position and performance of the Group. This is inconsistent with the fundamental principles of economic regulation.

DAA calls for the unitised approach to T2 capital remuneration (which massively backloads the return) to be reviewed by CAR from first principles. Even if the unitised approach would be accepted in itself, it is unclear that the manner in which it has been applied is fully consistent with the principle of the approach. Similarly, the Box1/Box2 treatment of entirely postponing the remuneration of circa €100m is questionable, particularly given the use patterns for T2, including emerging peak hour constraints.

1.11 Financial viability

In making a Determination, CAR is statutorily obliged 'to enable Dublin Airport Authority to operate and develop Dublin Airport in a sustainable and financially viable manner.'⁴ Financial viability relates to the immediate and long-term sustainability of DAA's trading and financial positions. This encompasses a range of issues. The most pressing issue informing DAA's comments is that it faces a refinancing requirement of €700m over the course of the next Determination. To refinance DAA will need to access a volatile debt market that is highly sensitive to company credit metrics and ratings.

The following are the key points which must be made:

- During the next regulatory period all DAA non-EIB debt facilities (€700m) will mature, namely:
 - €150m bank revolving credit facility expiring in December 2016;
 - €550m Eurobond which must be repaid in July 2018.
- This is a significant amount to refinance in the context of DAA's size, the concentration of its operations in one of Europe's peripheral economies and weak conditions (from a seller's perspective) in the market for debt of this type.
- DAA's current credit rating is BBB. This is three notches below the rating achieved in 2008 (A) when we last issued a significant new bond issue.
- Debt markets have at times been closed to Irish corporates over the period of the current Determination. Given its exposure to one of Europe's peripheral markets, DAA's expert advisors indicate that a minimum rating of BBB+ should be targeted in order for DAA to protect it from market shocks and risks on tenor, higher cost, conditionality and financial covenants.

⁴ State Airports Act 2004, section 22, sub-section 4.

- At a low investment grade rating, the risk of being shut out of the markets remains.
- If DAA found the debt markets closed to it, this in return would require that the shareholder, the Irish Government, would inject equity into the business to support the continued operation of the airport.

1.12 Recent cost rationalisation and future opex

CAR's last Determination placed DAA in a situation in which the annual P&L account faced an immediate adverse impact of >€100m, comprised of an explicit operating-cost reduction requirement of circa €30m, a deficit of circa €55m between the actual P&L cost of T2 and the allowed capital remuneration, and a revenue loss of >€20m due to the over-forecast of passengers. As described above, DAA's response was an aggressive rationalisation programme, (negotiated with the trade unions) with which there was an associated voluntary-severance-scheme (VSS) cost⁵ as well as a triggered commitment to staff that pay cuts would be reversed when certain financial performance criteria were satisfied in the future. Looked at narrowly, it is clear that DAA beat its regulatory efficiency target. Incentive regulation allows DAA this benefit (although it was not sufficient to counter-balance losses elsewhere) and the reduced level of opex becomes a benefit to the airport users in the next Determination period. At a summary level, DAA's messages on opex are the following:

- The level of rationalisation achieved in the current Determination was specific to an exceptional set of circumstance and is not repeatable;
- The savings came at considerable VSS cost and on the back of a triggered commitment to staff that pay cuts would be reversed in the future;
- The regulatory till will benefit from the pay cuts and will have the symmetrical responsibility to bear the costs of reinstated pay if and when that arises;
- Certain operational costs are facing upward pressures, in particular security cost.

In this paper, DAA discusses the various different methods of benchmarking/measuring efficiency. Top-down benchmarks have their uses, but ultimately are crude tools and cannot be employed in isolation as a reliable measure of efficiency/inefficiency. It is indispensable that bottom-up analysis, empirically based on the realities of the business and adequately tested for soundness, be the basis for any future efficiency requirement.

Pension Costs

Employee labour costs, which include the cost of providing a sustainable pension for employees, are included in the operating costs building block. Historically, DAA has contributed to a multi-employer scheme, the Irish Airlines (General Employees) Superannuation Scheme (IASS), along with Aer Lingus and the former SR Technics. The revision of this scheme, which is now in deficit, has implications for DAA opex in the current and future determination periods. This cost implication comprises a lump-sum buy out of pre-existing benefits and an on-going increased employer pension contribution. In CP3/2005 CAR noted that *'the Commission accepts, as a matter of principle, that users should bear the efficient costs of remunerating the DAA's employees at Dublin Airport, including pension costs'*.

⁵ The cost of the VSS was €58m, which was not included in any CAR allowance.

1.13 Commercial revenue⁶

In regard to commercial revenues, the delta between CAR's forecast and the outturn has been proportionately smaller than in the case of the passenger and opex forecasts. Nevertheless, the delta has been to DAA's disadvantage, driven for the most part by the over-forecast of passenger volumes (which are a major determinant of some commercial revenues). In terms of per-passenger commercial revenues, DAA has performed well and is now – in overall terms, though not at every level – exceeding CAR's (implicit) per-passenger revenue targets.

With regard to CAR's revenue forecasting process, econometric analysis undertaken for DAA indicates that CAR's top-down models perform well up until the economic downturn in 2008, but thereafter produce inaccurate results. Such models can be refined. The broader point is that forecasts should not rely on a purely mechanical approach, but rather should be guided also by the immediate business dynamics and prospects (the micro-evidence, as it were, some of which will be qualitative).

A number of points should be emphasised in regard to commercial revenue:

- It costs opex and capex to make revenue. The allowances for the former two need to be adequate to the purpose. This is an important consideration in any bottom-up opex review for the businesses in question. With regard to capex, it is striking that there was no general commercial revenue capex allowance in the current Determination (apart from the specific retail capital allowance). This should be rectified in the next Determination. Moreover, the capital allowance should fund innovative and entrepreneurial commercial initiatives (appropriate to the till), not all of which will succeed.
- The position of T1X needs to be regularised. DAA will apply for the full normal inclusion of the outstanding unremunerated asset value into the RAB.
- Over the course of the last two and half years, CAR has refined its policy in regard to commercial exits from the till. DAA will be bringing forward candidates for exclusion in the forthcoming capex consultation process, for ultimate decision by CAR in its Determination. As DAA understands it, the principles here are: firstly, that airlines will not be allowed to reject a commercial investment within the till and at the same time block its exit from the till on reasonable terms; secondly, the return goes to the party that takes the risk. (This is a simplification of complex issues. DAA looks forward to working with the airlines and CAR in ensuring constructive exit solutions.)

1.14 Peak capacity

From the point of view of service provision, the last issue we would instance in this overview is perhaps the most fundamental one. It relates to the profile of infrastructure use, namely to the fact the demand is markedly peaky and has become more so in the last 5-6 years. In operational conversations regarding capacity and use, the annual passenger figure is not the most relevant variable. More often than not the questions are: How does that affect the

⁶ CAR's term 'commercial revenue' comprises the DAA headings 'commercial revenue' and 'retail revenue'.

peak? Do we have the capacity in the peak? Peak capacity is constrained in a number of respects, and volume mix is also affecting the picture. The success of the CBP product has necessitated increased capacity in the security element of that operation. The success of the transfer product has necessitated an increase in the capacity of the transfer facility, and further increases will be necessary.

DAA welcomes the raising of the issue of peak congestion by CAR in the Issues Paper. An instinctive economic response would be to raise the peak price and so spread use more evenly through the day, but this response works against the economics of the overnighting carriers (currently accounting for circa 84% of volume), for whom it is imperative to depart early in the morning. In fact, the necessary response is to create more capacity: (i) through process – such as the current cross-organisation initiative to increase peak runway capacity; and (ii) through selective investment, for example to release additional capacity and improve the customer product in T1. CAR raises the issue of how additional capacity should be funded. Again, peak pricing does not offer a solution in DAA's view, and this is discussed in detail in the main body of the paper.

2. Approach to Regulation

The Issues Paper asked for comment on (i) the regulatory environment, with particular reference to the Airport Charges Directive and the National Aviation Policy, and (ii) the specific form of regulation. This section provides DAA's broad comments on these matters. More specific comments on aspects of the regulatory building blocks are provided in the individual sections.

The economic regulation of Dublin Airport should conform to the *Regulating Better*⁷ principles set out in Government policy, namely necessity, effectiveness, proportionality, transparency, accountability and consistency.

Dublin accounted for 62% of international air travel to/from the island of Ireland in 2012. This is clearly a strong market position, and demonstrates that Dublin is the only airport on the island with the scale to function as a hub. Nevertheless, Dublin has competitors, i.e. other airports on the island accounting for nearly 40% of the market. Dublin also competes with airports in other countries in attracting airline capacity, in terms of routes and schedules. In that sense, Dublin-Barcelona competes with, say, Manchester-Barcelona. Important also – in assessing the strength of Dublin's market position – is that Dublin's two main customers, Aer Lingus and Ryanair, account currently for circa 84% of the market to/from Dublin and exercise considerable countervailing buyer power. Given these considerable checks on Dublin's market power, it is debatable whether the current level of economic regulation of Dublin Airport is appropriate.

The level of regulation administered by CAR, pursuant to the Aviation Regulation Act 2001, predates the Airport Charges Directive (ACD) of the European Commission. Under the Directive, it is the airport managing body that sets charges, having consulted with airlines. The independent supervisory authority can review the charges on appeal, but must come to a decision within 4 months (6 months in exceptional circumstances), having made a ruling within 4 *weeks* as to whether the revised charges should apply in the interim. The appeal provision referred to above does not apply in Ireland, because the transposition reflected (as was provided for within the ACD) the pre-existing domestic regulatory framework. In fact, the existing regulatory model, as administered by CAR under the Aviation Regulation Act 2001, is more interventionist than the model envisaged under the ACD (with the former taking up to 2 years to set the price-cap, including appeals, and exerting close control over capital investment decisions, inter alia). Accordingly, it is appropriate to ask whether the existing model should be amended to reflect the less interventionist approach envisaged at European level. This would be in keeping with the Government's regulatory principles of necessity and proportionality.

Economic regulation is one of the areas of focus in the current process to produce a National Aviation Policy. This policy is expected to advance the debate on economic regulation and may give rise to a further detailed study of regulation (as envisaged in the Government's programme). Such processes may lead ultimately to legislative changes,

⁷ The Irish Government has a policy for *Regulating Better* (White Paper, Department of An Taoiseach, January 2004), which is a useful starting point for assessing the current system of economic regulation.

which are obviously outside the scope of the current consultation process. However, it would be possible for CAR, within its existing legislative mandate, to amend its approach to reduce the level of intervention (see below).

In DAA's view, the current regulatory regime exhibits a number of systemic weaknesses. Firstly, while the process proceeds from the starting point that DAA has market power and that the role of the regulator is to impose market-like discipline to ensure efficiency, service quality and appropriate investment, the same degree of scepticism is not typically applied to the inputs of the other key players. This is despite the fact that DAA's two biggest customers currently account for circa 84% of the business and have considerable countervailing buyer power. Secondly, the regulatory process is dominated by formal consultations, following which the regulator seeks to sum the responses in some meaningful way and come to a conclusion. Where responses from key players are directly in opposition, the process can (i) suffer from paralysis or (ii) lead to seemingly arbitrary and non-transparent decision-making. Thirdly, the interests of the airlines do not necessarily coincide with long-term national economic interests. In particular, an airline's planning horizon is shorter than an airport's and existing capacity constraints may represent a welcome barrier to entry for existing users in some cases, to the detriment of future users to whom CAR is required to give consideration.

Leaving aside broader questions of the appropriateness of the regulatory framework; even within its own terms, the current process demonstrates flaws. One example is the process of setting capital allowances for the 5-year Determination period. DAA is required to bid in advance with its capital proposals for the period. Given the length of the Determination process, this means in some cases that DAA is predicting an investment requirement up to 6 years in advance of the actual investment taking place. The degree to which costs can be estimated with certainty will differ greatly depending on the planned start date of the project and the level of specification of requirements at the time of estimation but this inherent uncertainty is ignored in the current process. If DAA wishes to deviate from this initial allowance, it must win unanimous agreement from the airlines (demonstrably problematic) or bear the risk that the regulator will not approve the expenditure at the following Determination.

A further fundamental problem with the implementation of the regulatory model is the question of capital remuneration. While the regulator conducted a detailed analysis of the WACC (itself arguable) to be allowed to DAA, the actual return in the period 2010-2014 is substantially lower for a number of reasons. In addition, to the shortfall resulting from the difference between forecast and outturn passengers, CAR has introduced a rather penal depreciation profile for T2, which postpones over decades the return of the capital which DAA has spent on delivering T2. The net effect of these and other decisions is that in 2012 the return on the Dublin Airport regulated asset base (RAB) was 3.6%, dramatically below the 7% cost of capital allowed by CAR in its 2009 Determination. A further €55 million of EBIT would have been required to achieve the specified return, adjudged by CAR to be the minimum return required to ensure that DAA maintained its investment grade status, which in turn underpins the cost of debt financing. There should be a requirement for the regulated entity (the portion of DAA's business subject to economic regulation) to trade on a financially sustainable basis, including achieving an appropriate return on its capital. At

present, the regulated entity is de facto underpinned by DAA's entirely separate commercial business, which would not be acceptable in the case of a privatised utility. DAA welcomes the fact that CAR's Issues Paper has opened this question for discussion and provides further comment in the relevant section. It is important to note that DAA's low rate of return on the RAB is not due to failure to meet efficiency targets (which were exceeded in the case of opex and generally achieved in the case of commercial revenue, once the effects of the passenger forecasts are allowed for), but rather due to the effects of the penal approach to capital remuneration.

As to the specific form of price regulation, DAA does not anticipate major changes in advance of the conclusion of the NAP, and any follow-on work, with regard to the regulatory regime. Within this context, DAA is supportive of incentive-based regulation, once the benchmarks are set fairly on the basis of rigorous, evidence-based analysis, within a process where DAA has adequate opportunity to review and comment on such analysis (where it is conducted by a third party) and where the process demonstrates reasonable responsiveness to evidence-based counter-assertions. In fact, DAA is supportive of further developing incentive regulation through increased use of rolling-efficiency incentives for both opex and commercial revenue. (The issue of incentivisation is covered in more detail in the relevant sections.)

2.1 Recommendations for future regulatory approach

As stated earlier, it is anticipated that the NAP and any follow-on review of the regulatory regime will address the fundamental questions of the level and structure of regulation, within that re-examining adherence to the Government's regulatory principles and considering whether to pursue a less-intrusive model as envisaged under the ACD. In the meantime, it is very much open to CAR to adjust its model under the existing legislation. In this regard, DAA would make the following high-level suggestions. These are key recommendations rather than an exhaustive set, and other more detailed recommendations are put forward in the course of this response document.

Reduced Complexity and Greater Clarity

There is a need for greater clarity and reduced complexity in regard to regulatory decisionmaking going forward. For example, DAA believes that there is still a considerable degree of uncertainty surrounding the remuneration profile of infrastructure projects such as T2 and T1X which in turns adds to regulatory risk. DAA believes there should be a focus on achieving reduced complexity and greater clarity as far as practicable. If achieved, this will allow for greater transparency and predictability both for DAA and for airport users, and will lower the risk of unintended consequences and errors resulting in reduced regulatory risk.

Reduction in the extent to which tug-of-war exchanges influence regulatory outcomes

Economic regulation will necessarily involve different stakeholders arguing for outcomes which are better suited to them. DAA would support explicit emphasis on a requirement for views to be evidence-based, and for the evidence to drive CAR's decision. The following are relevant examples from the last Determination:

- Two investment options were available in the choice of runway overlay for Runway 10-28. One was more expensive than the other, but also more efficient, leading to a better NPV outcome. The airlines opted for the cheaper investment, which was a demonstrably sub-optimal choice, and CAR approved this option, simply because it was the airlines' expressed preference. In that case, the evidence pointed to the first option, which would have been a better regulatory decision.
- In the case of the proposed fuel farm investment, CAR allowed for two fuel tanks to replace the existing three tanks, although expert evidence (for example engineering advice and the IATA recommendation on standard industry practice) pointed to three tanks. CAR's ruling was made on the basis that the airlines had vetoed three tanks and indicated that they were prepared to accept the risk of supply disruption. In this instance, the ruling weighed statements of airline preference above technical evidence. However, airline preferences as expressed in a regulatory consultation may be subject to bias. They do not necessarily represent the views of future users. Moreover, airline preferences can change, and quickly so, whereas provision of infrastructure has a long lead time, and inefficient investment decisions now can impose considerable future costs. A better regulatory decision in that instance would have been to align with the technical evidence.

Passenger focus

DAA believes that passenger welfare and preference should be given more emphasis in regulatory decision-making. Passengers have the classic characteristics of a stakeholder group whose interests are likely to be neglected, namely they form a large, anonymous, heterogeneous, dispersed group, with no collective organisation or representation. Nevertheless, passengers are the ultimate consumer whose welfare is to be served by the market outcomes which regulation targets. Passenger welfare is also a crucial factor in determining passenger spend, which in turn feeds the commercial revenue which subsidises airport charges. There are numerous ways in which passenger preferences can be ascertained/estimated, including sophisticated preference-revelation analyses, which provide objective, empirical analysis.

Duration of the next Determination

DAA believes that as a general principle regulatory determinations should be of significant length to provide an element of regulatory certainty and to establish a degree of price stability. DAA believes that there is a trade-off involved in determining the optimal duration for a price cap decision. If the price cap period is too short then this undermines the incentive properties implicit in the model and it adds to the risk and uncertainty for the regulated firm given the frequency of regulatory reviews. However, if the price cap period is too long then the risk is longer delays between revisions of regulatory assumptions and readdressing issues that might emerge in the periods between determinations. In deciding the timescale for the Determination period it is important that an appropriate balance is struck between a shorter time period, which should not result in important future decisions being deferred, and a longer review period which, in practice, may require CAR to initiate an Interim Review. On balance DAA believes that the current five year Determination period is appropriate and recommends that CAR continues to use this timescale for its next Determination.

Price cap formula

DAA does not believe that there is any requirement for any significant changes to the price cap formula. We suggest that CAR reinstates the briefing document outlining the inputs into the regulatory formula and the derivation of the price cap for that particular regulatory year as previously provided up until 2011. This was very useful from a practical perspective and would provide greater transparency. In relation to price cap compliance, for reasons of practicality we request that CAR extend the period for repayment to airline users of any over recovery on the annual price cap from the current 45 days to 90 days, in line with the time allocated to the IAA for issuing similar price cap rebates.

Consistency of approach

DAA would emphasise the importance of consistency of approach across the different regulatory building blocks and decision components. It is important when CAR is examining one discrete area that the implications of a decision for other aspects of the model are investigated and, if necessary, quantified. For instance, a decision in regard to capital expenditure may affect one or more of opex efficiency, passenger growth, commercial revenue, etc.

3. Customer Focus

DAA is committed to customer-focussed service provision. Our frame of reference for the customer is broad, covering airline customers, passengers, private and commercial users of our commercial services and other users of the airport infrastructure. In order to deliver on our customer commitment, DAA engages with customers through direct day-to-day interactions, co-operative forums, formal consultations, on-going tracking studies, international benchmarking and customer complaints management. Feedback from customers facilitates DAA in identifying priority issues for immediate follow-up and action. It also serves a more strategic function in identifying gaps in service delivery from a customer perspective which need to be addressed through longer-term planning, in terms of both service provision and facilities/infrastructure development.

In its 2009 Determination, CAR introduced 13 service quality metrics linked to 4.5% of revenues in the price cap for Dublin Airport. Of these measures, 2 were airline-facing requiring a process of data collection from DAA, 10 were passenger-facing with measurement through the quarterly ACI ASQ survey, and 1 – security queue time – was both passenger-facing and airline-facing, again requiring a process of data collection from DAA. Performance in regard to this last metric has proved problematic on occasion in recent times, and a section below is devoted to this service. Given DAA's continued commitment to delivering a quality customer experience, it is recommended that a service quality metrics (SQM) regime is retained.

3.1 Airline-facing quality measurements

With regard to the two purely airline-facing quality metrics, inbound- and outboundbaggage belt availability, Dublin Airport has consistently exceeded the targets. This is consistent with DAA's view expressed prior to the 2009 Determination that there was significant evidence that contemporaneous standards of service met the requirements of users at Dublin Airport. As already referenced, DAA is proposing an engagement with airlines prior to CAR's draft Determination to consider the most appropriate operations metrics for the future.

3.2 Passenger-facing quality measurements

In line with the fact that Dublin Airport has now scored in the top five European airports for customer satisfaction in 6 out of the past 8 quarters⁸, the quarterly results delivered by Dublin Airport on passenger-facing metrics have been consistently above target for all but one of the metrics (internet access/WiFi). In response to the two failures against this latter measure, DAA initiated a number of actions including completing customer research to ensure the true reasons for the failure were understood. This demonstrates DAA's intent to comprehensively address any area in which service quality has deteriorated. The significant improvement in the score for internet access/WiFi confirms DAA's accurate understanding of the factors leading to the failure and the fact that the appropriate corrective action was

⁸ ACI ASQ 2011-2013

taken. In this instance, the corrective action taken by DAA delivered the desired result. However, given the number of factors outside DAA's control that can impact this score, e.g. general expectations of WiFi speed, availability and connectivity, it is possible that achieving the target score for this metric could again become challenging. As this service is provided free of direct charge to passengers, DAA cannot sustain ever increasing bandwidth requirements without allowed opex increase. This cost-of-service issue must be considered in discussions regarding the future inclusion of, target setting and measurement approach for this and other metrics for the period of the next Determination.

Furthermore, DAA is frequently not the entire owner of a process, constituent parts of which are essential inputs into driving better customer experience through excellent service delivery. The service quality regime should be expanded to include others who have a responsibility in delivering discrete processes essential to the successful delivery of services such as baggage reclaim. It is important to note that the passenger's experience of the airport is a holistic one, which does not always consciously distinguish between the different service providers involved in producing the overall experience.

Through its on-going monitoring of customer experience, DAA understands how well Dublin Airport is performing in terms of customer satisfaction quarter on quarter and relative to our international peers. In general, Dublin Airport's performance across key touch-points has improved consistently since 2006. There have been very notable improvements in customer satisfaction scores for items such as ease of movement, cleanliness of washrooms, overall cleanliness, value for money of car parking, services for PRMs, speed of baggage delivery and WiFi while strong scores in areas such as airport staff courtesy and helpfulness have been maintained. As well as tracking satisfaction, DAA has also recently completed a detailed Customer Journey study, accompanying 21 travelling parties on their entire airport journey (split across departing and arriving journeys). This study provides valuable information regarding both rational and emotional aspects of the customer experience, helping to identify actions or initiatives that would improve customer experience. The study underscored the significance of communication and the provision of information to passengers over the course of their journey to give a sense of control, provide reassurance and assist with the efficient movement through various processes such as check in and security screening. Developments in technology are seen as having a positive impact on the provision of timely and targeted information.

As it is the customer's perception/view of what is good that really matters, a review of the suitability of the current metrics for the next regulatory period should be carried out, based on an analysis of what is important to Dublin Airport users in the context of their experience.

3.3 Security queue service

On occasion in 2012 and 2013 security queue performance has fallen below the standard we wish to offer to our passengers and this is reflected in a number of breaches of the CAR metric.

This function has faced significantly increased challenges due to changing airline requirements and passenger behaviours, including increased incidence of web check-in and increased volume of carry-on bags.

It is observed that web check-in is correlated with later arrival at the airport leading to higher peaks at security during the peak-hour. Peakiness *within* the peak hour has increased at Dublin Airport over the current Determination period, which further heightens the lumpiness of passenger arrival at security. As well as this change in passenger behaviour, it is observed that web check-in boarding cards require 8 seconds to process through a barcode reader, and much longer in the case of a poor-quality print-outs. Accordingly, the migration to web-check-in – efficient in itself – has resulted in a negative externality for the security process. Similarly, airline baggage-charging policies – effective at increasing revenue and reducing cost for airlines – have led to an increase in carry-on bags, entailing increased security resource from DAA. These behavioural changes exert significant impact on service performance and cost and should be given due weight in the regulatory Determination process, as well as costs which arise from formal changes in security regulation or compliance requirements.

DAA points out that airlines' cooperation is required to address operational issues around the increasing complexity of matching flight scheduling to passenger arrival and hence security resource planning. It is important that there is a consistency of message between the airlines and DAA relating to passenger arrival times at the airport and allowed items through security.

Over the current Determination period, DAA implemented a number of measures to mitigate the impact of the increasing demands on security and the increasing pinch-points in daily throughput:

- Provision of additional security staff,
- Advertisement in the media advising passengers to arrive 90 minutes prior to departure, although this initiative has not been supported by all users;
- Allocation of extra staff at landside/airside divide to speed up boarding card checking;
- Ergonomic changes to the layout of screening equipment, to allow increased screener productivity;
- Increased user engagement to facilitate as much as possible the changing requirements.

These measures have been useful in the short-term and DAA has not failed the metric on a single occasion since they were brought to combined effect. However, security processing is a dynamic activity and a longer term solution is required to handle the on-going changes in passenger behaviour and knock-on changes in security requirements. DAA is gaining a dataand analysis-backed understanding of both the queuing process and the impact of external factors upon that process. The knowledge gained from this process will allow us to develop speedier response to unexpected passenger arrival profiles and sustainable long-term improvements in how passengers are processed at Dublin Airport.

DAA is confident that, through investment in our security process, as well as deeper understanding of the queuing process gained from extensive data gathering and analysis exercises, it can address issues in security screening and deliver long-lasting benefits to Dublin Airport passengers. Changes to the security screening facility to implement sustainable improvement in the queue length metric will form part of the CIP for the next regulatory period.

3.4 SQM review

DAA supports the retention of SQMs within the price cap, where it can be shown that these metrics are of value to customers and relate to processes within the control of DAA.

In setting SQMs beyond the current regulatory determination period DAA makes the following recommendations:

- A review of the suitability of the current metrics for the next regulatory period is carried out
 - $\circ\,$ based on performance to date and an analysis of what is important to Dublin Airport users,
 - $\circ\,$ assessing the extent to which DAA is the entire owner of the process being measured,
 - considering future impact of issues/events/regulations beyond the control of DAA that may affect performance,
 - identifying additional or replacement metrics as appropriate.
 - The total service quality report should cover other key stakeholders (although such metrics would not be built into the price-cap).
- The current system of service quality **measurement** should broadly be retained, including data sources.
- For areas in which SQMs are employed, DAA recommends that CAR refers to detailed bottom-up analysis of costs to ensure that the relationship between the SQM target and the cost level required to deliver such a standard of quality is appropriate.

3.5 Future developments in the SQM regime

Currently, 4.5% of revenues are at risk through the SQM regime, with no rewards available for exceeding targets. The asymmetric nature of the SQM regime disincentivises increases in service quality levels beyond the Commission's proposed targets and, in contrast to similar SQM regimes in the Irish regulated sector⁹, unnecessarily increases the regulatory risk faced by DAA. Any service quality regime implemented by the Commission should offer symmetric incentives to DAA.

CAR raises the question in its Issues Paper as to whether a mechanism should be put in place to attempt to recompense specifically those users who have been adversely affected by a breach of target. This would have the obvious benefit of directing compensation to

⁹ See service quality scheme for ESB Networks and Eirgrid

those affected but there would likely be a number of practical obstacles to implementation including information deficits:

- How would individual passengers affected by a breach be identified?
- How would individual airlines affected by a breach be identified?
- Would there be a weighting depending on level of disruption caused? E.g. if there is a security queue metric failure would the same recompense be available to an airline whose flight was delayed as a result and an airline whose passengers were in the queue but whose flight departed on schedule?
- Would different levels of recompense apply if the airlines involved had differing business models?

DAA considers that such a mechanism, based on effect/recompense matching, may require a disproportionate level of resource in development relative to the materiality of the sums to be processed.

3.6 Conclusion

In DAA's view, the Determination process should review the set of customer service metrics to ensure that they are the right metrics, the ones that matter to customers, both airlines and passengers. It is important also that the cost of service provision (quality performance) is accounted for in such a review process. While it will ultimately be the responsibility of CAR to determine the metrics/targets which will impact the price-cap, DAA proposes - in the period between now and the draft Determination – to arrange an iterative engagement with its airline customers with a view to finding common ground on the future set of metrics, as an input to the regulatory process. It may be that such an engagement would affirm the existing metrics. DAA is also open to the possibility that new metrics and/or a different prioritisation of metrics could emerge. It is DAA's intention that this engagement would provide opportunity to focus on operational priorities and to understand preferences in any service-cost trade-off. It would also be important to consider how best to respond over time to new developments and changing requirements. Within the context of such a discussion, it would be appropriate as well to look at performance metrics for stakeholders other than DAA. The airport is a community of operators and the efficiencies/inefficiencies of each party can affect others.

In the coming months, DAA will bring forward a concrete proposal and timeline for the envisaged engagement with airlines. The output from the process would be submitted to CAR in advance of the draft Determination.

4. Volume Forecasting and Volume Risk

DAA welcomes CAR's balanced approach in the Issues Paper to the matter of volume forecasting, including reference to the under-performance of the 'one variable' forecasting model that it used for the last Determination, as well as recognition that the composition of traffic (as opposed simply to the aggregate level) has important implications for service provision and investment.

It is important to recall that volume forecasting is inherently difficult, for instance, the responses from airlines to last year's airport charges consultation suggested that traffic volumes for 2013 would be broadly the same as in 2012. In practice, the outturn to date has been significantly more positive than this, with growth for the first 8 months of the year at 6%.

Despite the inherent difficulty of volume forecasting, it has a significant role to play in all aspects of the airport business, not least in financial planning. The table below sets out the experience to date in regard to the accuracy of volume forecasting in the Regulatory Determination process and the financial impact on DAA, which bears 100% of the risk of deviation of volume outturn from forecast.

- In the 2001 and 2005 Determinations, CAR relied on DAA's forecasts following independent review. In the 2009 Determination, CAR did not engage an independent review and instead used its own forecasting model.
- The observed range of forecasting accuracy within the Determination is +2% (2004) to -12% (2009).
- The price cap is set by dividing allowed revenue by the number of forecast passengers. Accordingly, DAA loses 1 x the price cap value for each passenger below the forecast (and gains similarly where passengers are greater than forecast).
- The direct loss due to over-forecast of passengers for the 2010-2012 period was €36m, with heavy losses due to over-forecast set to continue in 2013 and 2014 (the losses will be of a similar order of magnitude to those incurred in 2012). In addition, there are further losses due to the use of passenger numbers as a driver in CAR's commercial revenue forecast and the basis for remuneration of T2.
- In looking at outturn vs. performance for previous determinations, from 2001 to 2009, when CAR relied on DAA's forecasts, it is not evident that there was a bias in the figures. For 2001-2003, DAA had over-predicted. From 2004-2008, DAA had under-predicted. In the latter case, the booming economic conditions were not expected. The net revenue gain/loss to DAA over the period 2001-2009 inclusive was €0.9m.

	2001 €m	2002 €m	2003 €m	2004 €m	2005 €m	2006 €m	2007 €m	2008 €m	2009 €m	2010 €m	2011 €m	2012 €m	Total €m
Actual passengers	14.3	15.1	15.9	17.1	18.5	21.2	23.3	23.5	20.5	18.4	18.7	19.1	
CAR forecast passengers	15.9	16.7	17.6	16.8	17.7	19.6	20.7	21.8	22.9	19.5	19.9	20.5	
Variance	(1.5)	(1.6)	(1.8)	0.4	0.7	1.6	2.6	1.7	(2.4)	(1.1)	(1.1)	(1.4)	(4.0)
Price Cap	5.38	5.27	4.98	5.21	4.90	6.20	6.39	7.38	7.39	9.31	10.43	10.74	
Favourable revenue impact Unfavourable revenue impact	(8.2)	(8.6)	(8.8)	1.9	3.6	9.9	16.5	12.3	(17.7)	(10.0)	(12.0)	(14.9)	44.2 (80.1)
Overall Impact													(35.9)

Table 2: Revenue Impact of Passenger Outturn Variance from Forecast 2001 - 2012

For a number of reasons, DAA does not seek to move to a system of risk-sharing in regard to passenger outturn versus forecast. DAA believes that it is better to minimise complexity within regulation, that it is important to promote incentive structures, and that increases in airport charges as a response to outturns being lower than forecast would be likely to be unpopular with customers and could prove commercially unachievable, and this in turn could lead to further asymmetric risk.

4.1 Producing a volume forecast

DAA believes that the responsibility for passenger forecasting for the regulatory Determination should rest with DAA itself, with appropriate input from airlines with regard to methodology and actual forecast information. DAA has developed a professional forecasting capability over a number of years. The methodology is based on on-going engagement with customers, route/schedule developments, market intelligence and econometric forecasting. The forecasting uses modelled GDP elasticities for (currently) 9 different route groups, including GDP forecasts for both origins and destinations.

DAA is currently undertaking a consultation process with customers, in which we have transparently presented our methodology and invited airline customers to input to the process through providing forecasts of (i) their own volumes over the Determination period, and (ii) total airport volumes over the Determination period. A number of other questions were also asked, including an invitation to comment on the methodology itself. Following from airlines' final inputs to this process, DAA will publish an Initial Range Forecast which – subject to later refinement, as necessary – it will propose as the basis for the regulatory Determination.

DAA believes that it would be inappropriate for CAR to continue with its current model, but also that it would be inefficient for CAR to seek to undertake a more detailed forecasting approach itself, in terms of duplicating the cost of the professional on-going forecasting function embedded within the airport business.

On the other hand, DAA accepts that CAR and the airlines will naturally be sceptical about forecasts that DAA would propose as is illustrated by the question in CAR's Issues Paper where it asks whether there is 'a way of structuring the price cap so that it allocates traffic risk in a manner that provides a strong incentive for the DAA to provide an unbiased traffic forecast that all parties can have confidence in'. As indicated above, DAA does not favour a risk-sharing mechanism. In fact, there is a much simpler solution to the perceived problem

of possible bias in DAA's traffic forecasts¹⁰, namely that DAA's traffic forecasts themselves would be subject to review (as to methodology, parameter values and assumptions) by CAR or its appointed expert. DAA proposes that such an exercise be conducted twice in the runup to the regulatory Determination, firstly in December prior to DAA's submission of its regulatory proposition, secondly in April/May, in advance of the draft Determination. In the event of disagreement, this could be documented, and it would of course remain open to CAR to deviate from DAA's forecasts as it considered appropriate in its draft/final Determination.

DAA emphasises that the review described above would take place within a context where DAA has already consulted with airlines on the matter of volume forecasting, giving transparency of methodology, and inviting input on both methodology and specific volume forecasts.

¹⁰ This is clearly not the case given that the forecasts are based on objective analysis and a methodology that has been developed over time and the same forecasts are used internally by the company for business planning.

5. Capital Expenditure and Capital Return

Issues relating to capital expenditure and capital return are presented as a single chapter in CAR's Issues Paper under the heading of 'Capital Costs'. This heading is somewhat understated, in the sense that what is at stake here relates to more than capital cost. By allowing or disallowing capex to enter the RAB, CAR exerts defining influence on how the infrastructure at Dublin Airport is developed for present and future users. In its policies of treating variations in capex from allowance, CAR gives or denies DAA flexibility to make real-time investment decisions and sets a level of financial risk. In setting the return of and return on capital, CAR exerts substantial control on the overall financial return which the regulated entity earns and the financial metrics which underpin its immediate and future viability, including its ability to raise and renew debt.

DAA's comments in this section are structured as follows:

- 5.1 Capital Allowances
 - Opening RAB for 2015
 - CAR's RAB Principles
 - Capex allowance for 2015-2019
- 5.2 Allowed return on capital
- 5.3 Allowed return of capital

5.1 Capital allowances

Opening RAB for 2015

In determining the opening RAB for 2015, there are three main areas of capital expenditure to be considered: T2 Main Projects; T2 Associated Projects; 2010-2014 capital expenditure versus allowance. In its Issues Paper, CAR reports that T2 Main Projects and Associated projects exceeded the combined capital allowances by €152m, expressed in 2012 prices. CAR also observed that it expects DAA to underspend the 2010-2014 capital allowance.

With regard to T2 Main Projects, while the response to the Issues Paper is not yet the place for detailed engagement on individual cost outturns, DAA would make a number of high-level points.

- Firstly, CAR erroneously in DAA's view and without sufficient evidence disallowed €27m of the projected cost (2006 prices) at the outset of the project. This cost was incurred and is now treated by CAR as over-spend.
- Secondly, CAR's allowance was originally set in 2006 prices, based on a cost report in 2006 prices, which explicitly indicated that construction inflation had not been accounted for. CAR now reports an overspend in 2012 prices, using CPI to create a common value base both for its original allowance and DAA's actual nominal expenditure. This calculation may be appropriate in terms of assessing an entry value into the RAB. It is not appropriate as a basis on which to assess the extent of additional spend relative to allowance. If used for that purpose, it means de facto that no proper adjustment has been made in the comparison against the allowance for construction price inflation.

- Construction contracts are agreed in nominal prices. In the case of T2, in accordance with best practice, the contracts were fixed-price lump-sum contracts, in which the contractor takes the risk on inflation, pricing in his expectation of inflation, at the outset, within the context of the competitive bidding process.¹¹
- At T2 tender stage construction inflation was forecast at c. 5% per annum due to the level of demand in the market for construction supplies and services. DAA were advised to expect at least this level of inflation buy-out in its contracts for T2, an estimate which was valid, evidence-based, and entirely appropriate given the economic circumstances at the time.
- As it transpired, construction sector and CPI inflation fell abruptly into negative values due to the severe economic downturn (see graph below). Given the fixedprice nature of the contracts into which DAA had entered (in accordance with industry best practice and Government guidelines), DAA received no benefit from the unexpected price deflation.
- In considering this matter, the issue is not whether DAA's inflation assumption was demonstrated to be correct, but rather (i) that it was necessary that such an assumption be made, and (ii) that the value of the assumption was reasonable.



Figure 1: DAA Construction Inflation vs. Actual Construction and CPI Inflation 2007-2010

Note: The construction indices used here are the CSO's Building and Construction index, including wages and materials, and the Society of Chartered Surveyors' Construction Cost Index.

¹¹ Construction sector projects are contracted in nominal rather than real prices, and the treatment of cost variation in labour and materials over the course of the contract has to be specified at the outset. T2 was contracted on the basis of fixed-price lump-sum contracts, as envisaged in the Department of Finance document *Capital Works Management Framework – Guidance Note for Public Works Contracts*¹¹. This means that the contractor accepts the risk of increases in the cost of labour and materials within the fixed-price period. Accordingly, contractor tender prices will implicitly reflect expected construction sector inflation, within the context of a competitive bidding process. Davis Langdon has commented as follows to DAA: *'In Davis Langdon in Ireland we have not had a contract without the inflation bought out in circa 20 years. It would be seen as extremely risky and require another layer of administration and oversight on the construction project should a project be left fluctuating in terms of inflation.'*

The outturn cost of T2 Main Projects was higher than originally budgeted by DAA based on the original 2006 cost report on which CAR based its allowance. However, the amount of the additional spend was approximately €55m in nominal terms. This represents an overspend of 8% relative to budget, which compares favourably with documented international experience of large scale construction projects. (Considerable academic research has been undertaken in this field. See, for example, B. Flyvbjerg et al (2004)¹².)

It is DAA's submission that the full amount of the outturn cost of T2 Main Projects and T2 Associated projects should be admitted to the RAB. If CAR's existing RAB principles would be used to counter this, DAA would argue that the RAB principles are unduly rigid and penal, and this is discussed in the next section below.

With regard to capital expenditure from 2010-2014, DAA confirms that it foresees underspending the capital allowance for the period, although by less than anticipated by CAR in the Issues Paper. Within this underspend, there will be categories where DAA has spent more than allowed and other categories where DAA has spent substantially less than allowed. Two points here: Firstly, the general underspend reflects DAA's prudent approach to capital expenditure in the current circumstances. Secondly, relative underspend and overspend across categories reflects the difficulty of planning capital expenditure up to six years in advance and highlights the need for greater flexibility. While the current RAB principles allow for deviation from allowances based on unanimous agreement with users as expressed through interim capex consultations, and while DAA has demonstrated its commitment to such consultations in the course of the last two years, in reality such consultations are unlikely to produce unanimous outcomes, given how the different players actually interact with the process. Again, DAA submits that the full amount of capex incurred should be remunerated, including where a specific envelope of expenditure has been exceeded.

CAR's RAB Principles

In its 2009 Determination, CAR set out its principles for RAB roll-forward, including how to deal with instances in which the outturn cost of a capital project exceeded the allowance. CAR's view was that such instances must fall into one of three categories: (i) overspend resulting from changes to users' requirements, (ii) overspend due to factors outside of DAA's control, and (iii) overspend due to factors inside DAA's control. With regard to (ii), factors outside of DAA's control were narrowly defined as consisting of (a) unforeseen environmental costs, (b) unforeseen planning obligations or planning-related contributions, and (c) unforeseen safety or legal obligations. In simple terms, subject to conditions with regard to user consultation and agreement, overspends could be allowed into the RAB in the case of (i) and (ii), but not (iii).

DAA regards these principles as unduly penal. As a matter of abstract logic, it is possible to divide instances of capital overspend into the above three categories, but real-life construction is more complex. As a matter of construction experience, additional spend may be forced for reasons that are not captured by (i) or (ii), as currently defined by CAR but

¹² Flyvbjerg B., Holm M.K.S., Buhl S., *What Causes Cost Overrun in Transport Infrastructure Projects*, 2004. Bent Flybjerg is Chair of Major Programme Management at Oxford University.

which are nevertheless not realistically within DAA's control. In summary, the principles do not reflect empirical evidence that large-scale (and indeed small-scale) capital projects frequently exceed budget and/or planned timescales without this necessarily reflecting systematic inefficiency on the part of the principals or agents involved. Costs may be higher than expected simply because of the difficulty of forecasting cost up to five years or more in advance, for projects that may not yet be fully specified, or as a result of wider changes affecting the regional, national or global economy. Construction projects are inherently uncertain. Cost is estimated, necessarily, on the basis of incomplete information. Contingency allowances are probabilistic rather than absolute. Reflecting these realities, successive Aviation Appeal Panels have argued against retrospective capital disallowance. The 2006 Panel concluded as follows on this point:

'The Panel considers that . . . RAB disallowances . . . are only justified in the event of some manifest deficiency in the performance of the regulated company, such as would be considered to be outside normal commercial parameters . . . Given the uncertainties surrounding capital projects, there is scope for a variety of views about what is the most efficient way forward, each of which might be considered reasonable. Only if DAA can be shown to have strayed outside the bounds of reasonable conduct or made an unreasonable decision about the type of capital expenditure incurred should there be any 'disallowance' issue for the Commission to consider.'¹³

While the 2010 Panel further stated:

'The Panel is concerned that capital markets might react negatively if the approach to regulation here is seen to disallow large tranches of past investment, as such retrospective adjustment almost invariably gives rise to regulatory uncertainty. The Panel considers that the circumstances under which RAB disallowances might be legitimately justified are in circumstances where (i) the investment is obviously imprudent or (ii) there is some manifest deficiency in the performance of the regulated entity. In considering the latter requirement, merely operating at less than maximum efficiency is not sufficient (most companies fall short of this standard in some areas). Rather, ex post disallowance should be only be contemplated where the performance of the regulated company can be considered to fall outside normal commercial parameters.'¹⁴

The line which CAR's capex principles take with regard to allowing capital cost over-runs is in marked contrast – for example – to the practice of the UK Civil Aviation Authority (CAA) in its setting of price caps for Heathrow, Gatwick and Stansted airports. The following examples are illustrative:

• In the case of Heathrow's capex programme of £5bn for the period 2008-2014, the CAA proposes excluding only £30m, relating to inefficiencies in procurement processes for the Terminal 3 Integrated Baggage Project. The CAA commissioned reviews of

¹³ The Aviation Appeal Panel, Decision, April 2006, paragraphs 6.4.7 and 6.4.13.

¹⁴ Aviation Appeals Panel 2010, Decision on the Appeal of Dublin Airport Authority, March 2010, paragraph 8.5.12.

Heathrow's capex efficiency, which concluded that Heathrow's approach was reasonable apart from that one case. $^{\rm 15}$

• In relation to the Stansted opening RAB for 2008, the CAA included £193m of unanticipated expansion cost, with only one exclusion of £37m (reflecting 40-50% of the expenditure in question), again based on a study.¹⁶

In both cases, the CAA carried out ex-post reviews of how particular projects were implemented, and the amounts that were disallowed corresponded to specific cases where there was clear evidence of inefficient conduct (rather than simply observed cost overruns). More generally, it might be useful to clarify that, with the possibility of a further disallowance of £11m at Gatwick (for which CAA is considering in its current regulatory review), these are the only amounts that have been, or are proposed to be, disallowed by the more recent two sets of reviews, covering total capex of more than £13 billion.

In summary, the CAA's policy remains that actual expenditure will be added to the RAB, except where there is demonstrable inefficiency.

Where regulated utilities bear risks of capital overspend, typically one of two different types of approach is seen to apply: (i) a narrow filter and high penalty, (ii) a wide filter and low penalty. In the case of (i), the narrow filter would mean only manifest inefficiency would be regarded as overspend, but with the high penalty of whole or partial disallowance. In the case of (ii), the wide filter would mean that all expenditure above allowance would be penalised, but with a low penalty, e.g. financing costs foregone for the regulatory period in which the expenditure was incurred. In the case of CAR's capex principles, there is both a wide filter and a high penalty, and this exposes DAA to higher capex-related risks than most regulated firms.

DAA believes that CAR's principles for the admission of capital overspends into the RAB are unduly restrictive and represent an outlier in terms of regulatory practice. In particular, DAA would emphasise that construction overspend risk is not covered within DAA's allowed WACC. Other regulated utilities generally do not face the exclusion of normal capital overspend from the RAB, nor do they typically face remuneration treatment such as applied to T2. Accordingly, insofar as DAA's beta value is benchmarked against those of other regulated utilities, it does not include an allowance for the scale of risk faced by DAA. The risks associated with capital overspends are likely to be asymmetric. The basic CAPM model cannot take account of asymmetric risks, and therefore an additional adjustment would be required for capital overspend risks to be covered by DAA's allowed cost of capital. The asymmetry reflects (i) the general tendency for large-scale capital projects to exceed budget, (ii) the asymmetric treatment by CAR of capital overspends versus capital underspends, and (iii) DAA's capital intensity as a business.

¹⁵ Civil Aviation Authority, *Economic regulation at Heathrow from April 2014: initial proposals*, April 2013, section 13.

¹⁶ Competition Commission, *Stansted Airport Ltd: Q5 price control review*, October 2008, paragraph 6.22 and Appendix D, paragraph 54.

Capital allowance for the 2015-2019 period

Under the Air Navigation and Transport Act 1998 (as amended), DAA has a statutory mandate to manage, operate and develop Dublin Airport. This mandate operates in parallel with CAR's mandate, under the 2001 Aviation Regulation Act (as amended), to facilitate the efficient and economic development and operation of Dublin Airport, meeting the requirements of current and prospective users. DAA believes that it, as airport operator, within the context of a consultative customer-focussed approach (informed by appropriate masterplanning), is best placed to determine the capital development requirements of the airport. While it is understood that within the regulatory regime CAR will wish to assure itself of the efficiency of capital spend, this should not equate to CAR deciding the capital development policy for the airport. In this regard, DAA would argue that the right balance has not yet been struck.

In its 2009 Determination, CAR wrote:

'It believed that the efficient and economic development of the airport and the interests of current and prospective users are best served by grouping items in a CIP and providing an overall budget for delivery of an agreed set of outputs. This then leaves DAA with the discretion to adapt its plans as appropriate subject to respecting the overall budget allowed for that grouping.'

This approach by CAR is definitely a step in the right direction, although it will be important to see how the reconciliation works in practice. In particular, the point of creating envelopes of capital spend and 'discretion to adapt' would be undermined if the reconciliation was to be conducted at the level of the individual project within the envelope. As remarked elsewhere, DAA's experience is that actual capital spending does not exactly map to what was forecast (nor should it be expected to). In the case of some envelopes, expenditure will be below the allowed amount. In the case of others, it will be above the allowance. Our expectation is that these outturns will be reviewed on the whole. Our experience also leads us to recommend that larger envelopes for general categories of spend are required, e.g. general operations capex, and that new envelopes are required, e.g. commercial revenue maintenance and development. DAA will make more detailed recommendations in this regard in our regulatory proposition submission.

In summary, for the period 2015-2019, DAA would support further steps in the direction of increased flexibility for the operator in determining capital spend in real-time, without undue risk of subsequent disallowance. With regard to the time-profiling of capital expenditure, DAA sees no reason in general to deviate from the policy of an even distribution of the capital expenditure allowance over the course of the 2015 Determination period. In other circumstances, for instance where a large investment was due to occur in the first years of the Determination, this policy might require amendment by exception.

DAA intends the capital investment plan (CIP) at Dublin Airport to be developed in response to gaps between our users' needs and current facilities, and to effectively deliver solutions for these requirements in an economically efficient manner. DAA engages with users on an on-going basis with regard to their service and facility needs, and has also undertaken recent formal consultations with regard to (i) Terminal 1 (Pascall & Watson process), (ii) general 'requirements' (as envisaged under the ACD, linked with our consultation on volume forecasting) and (iii) fuel farm and associated infrastructure. (Other recent consultations have related to capex in the current Determination period rather than the next period.)

As part of our preparation process for the next CIP, DAA plans to facilitate a substantial programme of capex consultations, to take place in December 2013 / January 2014. The proposed process and timeline outline for these consultations will be published at a later date. It is DAA's view that this consultation process should obviate the need for CAR to conduct a separate capex consultation process later in 2013, and we will seek to liaise with CAR to ensure that DAA's capex consultation process meets CAR's process requirements. DAA would anticipate that CAR – at a minimum – would be an observer in this capex consultation process.

Consultation will be open to all airlines/ground-handlers operating at Dublin Airport, and DAA will encourage all parties to engage in the process. To ensure fairness and consistency in our treatment of all airlines/ground-handlers operating from the airport – i.e. concurrent access to the same information – DAA will manage the consultation process through a central dedicated resource. The same timelines for input to the process will apply to all parties, and all will be entitled to input to the process with their identity remaining confidential if they so choose.

As the consultation process will be on-going when DAA makes its regulatory proposition to CAR, the proposition will refer only to packages of capex expenditure. Full details of intended projects will be submitted to CAR following consultative engagement with airlines/ground-handlers.

5.2 Allowed return on capital

In setting its weighted average cost of capital for the next Determination, DAA believes that CAR should:

- take a consistent view of likely future market conditions and therefore set the individual WACC parameters in a way that is internally consistent;
- take appropriate account of the impact of country risk, in particular on the base rate (risk-free rate) in estimating the cost of equity;
- estimate the cost of debt and the gearing level in a consistent manner to allow an Irish airport operator to recover its efficiently incurred cost of debt;
- use comparator companies that appropriately reflect the risk faced by DAA.

While DAA supports in principle CAR's continued use of the CAPM model in deriving the cost of capital for DAA this is based on the following recommendations.

Consistency of approach

In its Issues Paper CAR provides empirical evidence on the risk-free rate as well as an overview of regulatory precedent on the risk-free rate and the ERP (Equity Risk Premium), in addition to a high-level discussion of possible arguments for developing the individual

parameters. However CAR does not discuss the issue of consistency between the individual parameters, e.g. the fact that there tends to be negative correlation between the risk-free rate and the ERP¹⁷ and how it plans to ensure that the WACC Determination reflects this interdependency.

Similarly, CAR's Issues Paper does not develop a full position on the treatment of the risks associated with investing in Ireland. Irish government bond yields continue to trade at a premium of more than 200bps relative to German government bond yields and similarly Irish investment grade corporate bonds have been issued at premiums of 100bps and more relative to a broad Eurozone BBB index. Going forward CAR must take account of this risk.

Country risk and 'risk-free rate'

The appropriate treatment of country risk was already a major area of disagreement at the last review. CAR did not adjust the risk-free rate ('RFR') for a country risk premium (CRP) that reflected the increased financing cost of Irish companies associated with the default risk of the Irish government, which is DAA's shareholder.

The importance of reflecting the impact of sovereign debt risk on the cost of equity has been widely recognised in finance literature¹⁸, which shows that there are non-diversifiable downside risks associated with investing in a country with increased sovereign debt risks¹⁹. Specifically, there are perceived to be increased risks of the government imposing adverse changes to an investor's prospect of cost recovery in order to raise finance to pay for government debt. Examples of regulatory precedent which take account of this risk are set out in Table 3.

¹⁷ See e.g. Wright / Mason / Miles (2003): A Study into Certain Aspects of the Cost of Capital for Regulated Utilities in the U.K., p.13 & pp. 31-35; available at: http://www.ofwat.gov.uk/regulating/pap_rsh_costofcaputiluk.pdf

¹⁸ See e.g. Damodaran (2003): *Measuring Company Exposure to Country Risk: Theory and Practice*, pp. 17-19 who discusses different ways of including a country risk premium in the WACC estimate including an adjustment of the ERP, risk-free rate and different ways of dealing with the 'beta' of country risk. See also Bali and Cakici (2006): World Market Risk, Country-Specific Risk and Expected Returns in International Stock Markets, Working Paper who find that 'country-specific total and idiosyncratic risks are significantly priced in an ICAPM framework with partial integration.'

¹⁹ See e.g. French & Poterba (1991): *Investor diversification and international equity markets,* American Economic Review. Also see a report prepared by the CER's advisers Oxera (2012): *What is the cost of capital of Bord Gáis Networks* on the different ways the sovereign debt crisis affects the cost of debt and equity.

Country/Regulator	Cost of Equity	Cost of Debt				
Ireland / CER	Uplift based on difference in	Includes same CRP as for				
	corporate yields vs. German	cost of equity				
	corporate yields					
Italy / AEEG	'Risk-free rate' calculated	Calculated as 'RFR' (including				
	based on local government	CRP) plus spread				
	bond rate					
Portugal / ERSE - Gas	'RFR' allowance based on	'RFR' plus spread				
	average of German and					
	Portuguese rate					
Portugal / ERSE - Electricity	RFR allowance based on AAA	'RFR' plus spread				
	countries but MRP uplift					
	from 4% to 6.5%					
Spain / CNE	WACC Allowance of government bond rate +200bps; no					
	explicit CAPM-WACC; hence no differentiation of impact					

Table 3: Regulatory precedent for including country risk in the Eurozone

Source: NERA – Analysis of most recent decision in each country.

In addition a number of the regulators referenced above have also introduced re-opener / updating mechanisms that adjust the allowed WACC in response to changes in the government bond rate thus protecting the regulated entity from the risk of worsening country risk while passing on improvements to customers.²⁰ There is therefore strong regulatory precedent for including an appropriate premium to compensate investors for the additional risks involved with investing in Ireland. DAA believes that this adjustment must be made in setting the cost of capital for the next Determination.

Cost of debt

CAR's Issues Paper is not conclusive about their proposed approach to the cost of debt. In particular, CAR does not conclude on whether a benchmark or embedded cost of debt approach will be used for setting DAA's allowed debt costs.

At the last review CAR (primarily) relied on the use of European benchmark indices for setting DAA's debt costs. However, Irish corporate debt has recently been issued at a significant yield premium relative to similarly rated European corporate debt thus suggesting a European benchmark index is no longer appropriate.

DAA believes that maintaining the use of a European benchmark would systematically understate the true cost of debt of an Irish company. An alternative to using benchmark indices would be to set the cost of debt based on DAA's embedded debt plus a forwardlooking allowance for (expected) new debt costs. DAA recommends this approach as it

²⁰ The Spanish WACC is updated annually, adjusting for changes in the Spanish government bond rate in that year thus leading to higher volatility than the CER's trigger mechanism, which only passes on 44% of changes in the government bond rate and only when yields have changed by more than 0.5% (cf. CER 2012 decision, ch. 11.5 - 11.7.)

allows recovery of the efficiently incurred cost of debt, whilst taking into account Irish country risk.²¹

Choice of comparator companies for estimating beta

CAR raises a number of important questions with regard to estimating beta at this review, specifically:

- Whether there is any evidence to revise the beta of 0.61 used in 2009;
- Whether the airport sector has become more or less risky since 2009;
- Whether the fact that DAA is based in Ireland matters;
- Whether the impact of changes in the airline mix matters.

In this context it is worth noting that the beta of an airport is strongly affected by the regulatory framework, including treatment of capex, and other aspects of the regulatory model. The majority of listed European airports face less stringent rules on capex overruns. This is one reason why observed beta values for listed European airports are unlikely to be good comparator values for Dublin Airport.

DAA believes that it has been exposed to an increasing degree of risk in recent years given the degree of volatility affecting the Irish economy. In addition, the recession may have also had a further impact on the DAA's risk given that discretionary incomes have fallen and this has impacted on commercial revenues at Dublin Airport. It also should be noted that the percentage of income-sensitive leisure and low cost carrier passengers at Dublin Airport has increased significantly since CAR last undertook a full scale review of DAA's beta in 2005. DAA recommends that CAR takes these issues into account when re-determining the beta for DAA and assessing whether its 2005/2009 value remains appropriate.

Estimation of DAA's cost of capital

DAA has commissioned the expert consultancy firm NERA to prepare a report estimating the cost of capital for DAA for the next Determination period. This report will be provided to CAR as part of DAA's regulatory proposition. DAA recommends that, given the complexities and the specialised nature of the analysis required to derive the cost of capital, CAR would similarly engage an independent expert to assess this particular building block.

5.3 Allowed return of capital²²

CAR applied three different approaches to return of capital from the RAB (depreciation profiles). The first, relating to pre-2009 assets, is straight-line depreciation of RAB value, indexed to adjust for inflation. The second, relating to general capex from 2009 onwards, is an annuitized approach, essentially similar to a standard domestic mortgage in that the payment remains constant over the life of the return, with a decreasing component of interest and an increasing component of principle over time. The third, relating to T2 and associated assets, is a unitized approach, which is discussed in more detail below. In

²¹ See e.g. *Moody's (2011): Rating Action:* Moody's downgrades Bord Gáis from Baa1 to Baa3 where Moody's notes that regulated utilities would not be expected to have a credit rating more than 2 notches higher than the sovereign.

²² CAR remuneration treatment of post-2009 assets combines return of and return on capital in a single-formula calculation. The rate of return within the calculations is set at the level of the allowed WACC. The figures presented in this section generally combine return of and return on capital.
addition to the unitized approach, CAR also deferred a portion of T2 remuneration entirely, labelling as Box 1 the amount to be remunerated immediately and Box 2 the amount deferred – again, this is discussed further below.

Like other similar capacity addition projects of its scale, T2 required a large capital outlay prior to operation which was pre-funded with medium-term debt. The actual profit-and-loss impact of the opening of T2 has been to increase DAA's depreciation cost by $\leq 32m$ per annum and interest cost by $\leq 35m$ to $\leq 40m$ per annum. In contrast to this increased cost of $\leq 67m$, the additional remuneration allowed by CAR during the current regulatory period averages $\leq 13m$ per annum. This has led to an average annual negative impact on the DAA profit-and-loss account of circa $\leq 55m$.

There is no guaranteed return in incentive regulation, but generally speaking it is achievable for the regulated entity to make or exceed its allowed return if it meets or exceeds its efficiency targets, revenue targets, etc. By contrast, in the case of the regulatory regime which DAA faces, even if DAA exactly achieved all expenditure, revenue, service quality and capex projections etc., there is a structural impediment in the regulatory period – namely the depreciation treatment of T2.

The impact of this treatment can be seen in the Regulated Entity Accounts where the regulated entity made a profit before exceptional items of ≤ 3.5 m in 2012 and a loss of ≤ 0.4 m in 2011. The return earned on the RAB in these years was 3.6% and 3.4% respectively. CAR determined that the cost of capital for the regulated entity was 7%, which is double the actual recorded return. For the regulated entity, the key funding metric of FFO: Net Debt is below 10%.

The box below summarises the respective treatments Dublin's T2 and Heathrow's T5. It is readily evident that the treatment of T2 is relatively disadvantageous.

Comparison of regulatory treatment of T2 and T5 – Heathrow

CAR allowed the costs of T2 that it allocated to Box 1 into the RAB on the day the terminal came into operation and then remunerated DAA on a unitised approach.

There are four main differences between the treatment of T2 by CAR and the treatment of Terminal 5 in Heathrow by CAA:

- CAA allowed the total cost into the RAB, i.e. no use of a 'Box 2'.
- BAA received a return on the RAB and depreciation in the normal fashion, i.e. no unitisation.
- CAA allowed for a 25bp premium on the WACC for Q4 to allow BAA to deal with the asymmetric cash flow risks associated with the construction of T5
- CAA allowed revenue advancement to BAA so they were allowed to add expenditure to the RAB as it was spent and not in a large lump sum at opening, while DAA was not remunerated for any expenditure until T2 was operational. CAA gave three reasons for its treatment:
 - To promote the 'efficient, economic operation of airports it is in the interests of users to allow prices to adjust such that prices are relatively higher prior to



Note: The figures in the graph above have been adjusted to make a like for like comparison using a ratio of remuneration to cost.

The graph shows that BAA received 10% of the total remuneration for T5 before it was opened, and had received 50% of total remuneration by year 12. In comparison, DAA received no remuneration before the opening of T2 and will not have received 50% of total remuneration until year 27 (based on passenger profile as per 2009 Determination).

DAA welcomes CAR's indicated willingness to re-examine its approach to return of capital and discusses some of the relevant issues in more detail below.

Box 1/Box 2

Remuneration

In its 2007 draft Determination, CAR was of the view that T2 capacity should be remunerated, in the first instance, only to the point that it increased total airport capacity to 30mppa²³. The remaining portion of value, 'Box 2', was deemed to be unnecessary at present, and would not be remunerated until the trigger of 30mppa was reached. In the final Determination, CAR's sizing of Box 1 was based on the midpoint of the required size range for T2, as per CAR's appointed consultants. This equated to 73% of DAA's proposed sizing of T2. Accordingly, CAR set the value of Box 1 as 73% of the total relevant value (there was some debate at the time as to what precisely constituted the total relevant value for

²³ mppa = million passengers per annum; pph = departing passengers per hour

this purpose). CAR's sizing of Box 1 equated to a busy hour capacity range of 2,897-3,310pph, the midpoint being 3,104pph, corresponding to the selected size of T2 Box 1.

A number of points arise with regard to the above.

- In setting the original 30mppa threshold, CAR took the *'comfortable capacity of the current T1'* to be 18.5mppa²⁴, and the capacity of T2 Box 1 was taken to be 13mppa.
- The above implied a total capacity of 31.5m. CAR stated: 'However, the Commission considers that in order to achieve a balance between protecting users from potential over-payment and respecting the statutory obligation to enable the financial viability of the DAA, a lower threshold is potentially warranted. Hence the Commission proposes a threshold for Box 1 of 30 mppa.'
- In its final Determination, CAR increased the Box 2 trigger to 33mppa, stating that the increase was 'because box two is smaller [than in the draft Determination], reducing financing concerns, and the Commission's estimate of T1's capacity was based on studies conducted prior to recent capacity-enhancing projects in the terminal referred to by Ryanair.'

It appears to DAA – by reference to CAR's explanation above – that the 'band' for Box 1 remuneration should have been 18.5m–33m, whereas the actual band used by CAR in its model is 18m-43m. DAA would point out the following:

- The effect of using a band of 25m (18m-43m) passengers is to further 'dilute' i.e. reduce, the return of T2 capital in the first decades of asset life²⁵.
- In fact 43m is in excess of the combined capacity of both terminals, including Boxes 1 and 2.

In general, DAA would make the comment that there is insufficient clarity on these matters in CAR's published materials.

Trigger

Aside from the appropriate remuneration band for Box 1, the question arises as to whether the trigger for Box 2, viewed particularly in the light of the use profile for T2 since its opening, makes sense. At the time of the determination in 2007, there were a lot of theoretical discussions about what the typical busy hour usage of T2 would be. The table below highlights the actual peak hour²⁶ demand and typical busy hour demand for T1 and T2 for the years 2007-2013.

An explanatory note to the table will be helpful. There are a number of ways to measure peak passenger flow. (The existence of different ways of measuring the peak highlights the complexity of peak capacity.) Two ways are represented in the table below. The first is peak volumes on an aircraft movement basis. This method identifies the peak hour by

²⁴ We believe that this was a reasonable assumption.

²⁵ DAA's original, architecturally-based quantification of T2 capacity was 11-12m passengers per annum. Elsewhere, DAA comments that passengers per annum is not the most meaningful measurement of capacity. Given the particular use profile faced by DAA, peak hour capacity is the most relevant measure.
²⁶ It is important to note that the typical busy hour and peak hour figures for Dublin Airport do not form an additive

²⁶ It is important to note that the typical busy hour and peak hour figures for Dublin Airport do not form an additive relationship with the corresponding figures for T1 and T2. In 2013, the typical busy hour for T1 occurs between 06:05 to 07:04, for T2 between 06:35 to 07:34, while the busy hour for Dublin Airport (both terminals combined) occurs between 06:25 to 07:24. The table is based on peak departures – there are other peaks in other processes at other points of the day (e.g. stand availability).

movements (scheduled departure time, actual passengers) and then records actual passenger volumes associated with those flights in that hour. For this measure, we show both the absolute peak volume recorded and also the 95th percentile busiest hour. The second peak volume measure represented in the table below uses a pure passenger basis. This method identifies the peak hour by passengers (scheduled departure time), i.e. without reference to movements. Again, we show both the absolute peak volume recorded and also the 95th percentile busiest hour. Note also that for each definition, peak hour demand refers to the busiest 60 minute period rather than a clock hour. For the remainder of this discussion, we refer to the passenger-based measure, which is the lower shaded portion of the table.

Peak volumes (movement basis)	2007	2008	2009	2010	2011	2012	2013
95% Busy Hour - T1 Movement Pax	4,849	4,025	3,858	4,443	2,088	2,464	2,494
Peak Hour - T1 Movement Pax	5,244	3,758	4,538	4,985	3,921	2,506	2,512
95% Busy Hour - T2 Movement Pax					2,721	2,458	2,893
Peak Hour - T2 Movement Pax					3,324	2,885	3,284
95% Busy Hour - DUB Movement Pax	4,849	4,025	3,858	4,443	4,714	4,753	5,544
Peak Hour - DUB Movement Pax	5,244	3,758	4,538	4,985	5,556	4,464	5,219
Peak volumes (passenger basis)							
95% Busy Hour - T1 Pax	4,774	4,528	4,307	4,547	2,894	2,624	2,434
Peak Hour - T1 Pax	5,244	5,194	4,729	4,985	3,660	2,895	2,695
95% Busy Hour - T2 Pax					3,062	2,877	3,093
Peak Hour - T2 Pax					3,354	3,125	3,284
95% Busy Hour - DUB Airport Pax	4,774	4,528	4,307	4,547	4,969	4,803	5,258
Peak Hour - DUB Airport Pax	5,244	5,194	4,729	4,985	5 <i>,</i> 556	5,349	5,856

Table 4: Peak and Busy Hour Demand in T1 and T2 2007 - 2013

Note: To interpret table, see explanatory comments in text.

With regard to the specific data in the table, a number of observations can be made:

• Peak hour demand is higher now than in 2007/2008, even though overall passenger numbers are still considerably lower.

- Current agreed declared capacity is 3,375²⁷ for T1 and 3,450²⁸ for T2. Peak hour use of T1 was 86% of 3,375 in 2012, falling to 80% in 2013 (to date), due to the move of Aer Arann to T2. Peak hour use of T2 in 2013 (to date) was at 95% of the agreed declared capacity.
- At 3,284, peak hour use of T2 in summer 2013 was 106% of the throughput capacity on which Box 1 was sized, namely 3,104, while typical busy hour use was 100% of that capacity. This makes a case for the Box 2 trigger to be revisited, given that we are now only at circa 20mppa versus a trigger of 33mppa. Moreover, the current declared total capacity for T2 is 3,450 (i.e. including Boxes 1 and 2, in CAR's terms). While there is some room for increase here, the possibility for an increment above 3,450 would be much less than the relative value size of Box 2.
- Capacity across terminals is not entirely fungible (see below). What is most relevant therefore in the current discussion are actual patterns of use, rather than – for example – de-emphasising the current use level of T2 on the basis of there still being some available capacity in T1.
 - Airlines seek to concentrate their operations in a single terminal (which explains the move of Aer Arann, operating as Aer Lingus Regional, to T2).
 - Flights to the USA need to operate out of T2 in order to access CBP. New entrant airlines have preferences for particular terminals and particular piers.
 - Not all piers have the same operational profiles, e.g. Pier 2 has no airbridges, no segregation of inbound and outbound passengers.
 - Not all stands can accommodate every aircraft size, etc.

In operational conversations regarding capacity and use, the annual passenger figure is not the most relevant variable. More often than not the questions are: How does that affect the peak? Do we have the capacity in the peak? The operation of an airport revolves around peak use, and the annual total figure (very relevant for other purposes such as revenue) is notional in that context. Since the relationship between peak use and total use is not fixed, as recent data demonstrate, it follows that a regulatory operational trigger will be most meaningful and effective if set in terms of peak use. Moreover, the Box 2 trigger appears to be too high and should be revisited. Based on current use profiles and total T2 capacity, it is not clear that there is justification for deferment of any T2 capital investment.

Unitized approach

²⁷ Prior to the construction and opening of T2, T1 had an agreed declared capacity of 4,050 passengers in the peak hour. Highest recorded peak usage (passenger basis) was on average 24% in excess of capacity in 2007, 2008 and 2009, prior to the opening of T2. The current agreed declared capacity for the two terminals combined is 6,825 (3,375 passengers/hr for T1 and 3,450 for T2). The reduction in agreed declared T1 capacity post the opening of T2 was consistent with CAR's expectation/requirement of reduced opex in T1. The current agreed declared capacity for the two terminals combined is 6,825 (3,375 passengers/hr for T1 and 3,450 for T2).

²⁸ The agreed declared capacity for T2 is lower than the design capacity of 4,200. The current constraint is security. While this capacity constraint could be raised through adding security lanes, the constraining factor would then be check-in at approx. 3,600. This latter constraint is less tractable. Actual profiles of use by different airlines and the mix of long-haul versus short-haul affects actual throughput capacity, reducing it below the design level. For these reasons, the design capacity, based on continuous seamless use of the facility, is not achievable in current operational reality. Note that the design capacity was based on an assessment of likely technological advances in check-in which have not yet come to pass or are experiencing unexpected passenger resistance.

Above we have discussed the *application* of the unitized approach; in this section we consider the *principle*.

With the unitized approach, CAR's intention in principle was to equalise the remuneration of T2 not by year (annuitized approach), but by T2 passengers (T2 passengers in this context meaning not actual T2 passengers, but passengers incremental to the designated capacity of T1). The return is therefore based on an assumed profile of passenger growth. If growth undershoots projections, the return per passenger will be required to rise. This approach applies to Box 1. The Box 1 value corresponded to the value of T2 that was right-sized at the point of opening in CAR's view. Nevertheless, the unitized approach pushed remuneration into the future, linking it with future passenger growth, which is uncertain. This level of uncertainty would be unacceptable to a privately-owned utility, and was only tenable in this case because DAA is wholly-owned by the State and was under instruction from Government to deliver the infrastructure.

Notionally, the regulated entity is indifferent to unitization because the NPV for the streams of remuneration under the different depreciation scenarios is identical. However, the regulated entity is not indifferent, because its immediate return is suppressed, which – for example – gives rise to challenges in the bond market and attendant costs. Moreover, the Regulatory variables and regimes change. future is inherently uncertain. Economic circumstances are subject to dramatic cyclical and structural changes. And the regulated entity's actual discount rate for its own decision-making varies from the discount rate allowed by the regulator. In summary, unitization was an unorthodox device to delay remuneration for a large piece of infrastructure. Not only is remuneration delayed, but the profile of remuneration remains uncertain. It is also not certain that the level of higher charges necessary in future years will be commercially viable for DAA which means that the revenue postponement may not be NPV neutral. Furthermore, it is an illogical approach given that in the 2009 Determination, CAR was forced to make a financeability adjustment whereby it accelerated depreciation on another specific project. The use of this unitized approach is an economically unfair imposition and does not conform to the principle that economic regulation should endeavour to replicate competitive market outcomes. DAA calls on CAR to revisit this approach from first principles in the forthcoming regulatory Determination.

Suppressing capital remuneration now has the effect of creating a bulge of capital remuneration in the future. The shortfall below the 7% return now is treated as 'capitalised financing' and is added to the opening RAB position. As per CAR's model, T2 remuneration is €14.5m in 2013 (actual outturn will be lower due to lower than expected passenger volumes). This will rise to €110m by 2036, with the asset well into the second half of its life. Moreover this excludes the remuneration of Box 2 which will further add to the total remuneration charge.

6. Capacity Constraints and Peak Pricing

Dublin Airport has a number of constraints at the moment, which are driven by the type of operations at the airport. These constraints are highlighted in Table 5 below. While this table and the later one are empirically based they should be taken as indicative.

Time	0400-0600	0600-0900	0900-1200	1200-1400	1400-1700	1700-2200	2200-0400
Pier 4 Stands							
Pier 3 Stands							
Pier 2 Stands							
Pier 1 Stands							
West Apron							
Central Apron							
South Apron							
T2 Check in (1-28)							
T2 Check in (29-56)							
T2 Passenger Screening						÷	
US Preclearance							
TSA	Closed					Closed	Closed
T2 Immigration							
T2 Transfer Corridor			Į				
T1 Check in							
T1 Passenger Screening						1	
T1 Immigration					J	1	

Table 5: Capacity Status by Time Block 2013



This table highlights the periods of the day in which congestion is experienced across the various facilities/infrastructure (i.e. in 'red'). Some facilities may be congested for a period of time but experience no congestion in other periods. For example, it is clear from the above table that early in the morning and late at night all contact stands are fully occupied. This is because >80% of Dublin Airport's traffic is generated by its two home based carriers. The 'home-base' refers to the fact that these carriers base aircraft in the airport overnight, which depart as soon as possible in the morning in order to start generating revenue and then return late at night, in order to be available to repeat the process the following day. Stand demand is further compounded by early morning arrivals from North America, prior to the first wave departure times. The initial wave of departures in the morning puts pressure on contact stand availability and runway infrastructure. Subsequently, stand congestion reduces until aircraft begin returning after 22:00.

Similarly, this table highlights other congestion points e.g. T2 check-in experiences some constraints between 06:00-09:00 during the long haul departure peak but during other periods, there are less issues.

The table below reproduces the last row from Table 4. Peak demand variation has not mirrored total passenger variation in recent years. The table shows how peak demand declined from 2008 to 2010 but significantly recovered in 2011 on foot of the opening of T2. The current demand in 2013 is higher than the 2007/08 demand, despite Dublin Airport still handling significantly less passengers annually.

Table 6: Peak	Hour Demand	2007 - 2013
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	Summer 2007	Summer 2008	Summer 2009	Summer 2010	Summer 2011	Summer 2012	Summer 2013
Dublin Airport peak hour demand (passenger based)	5,244	5,194	4,729	4,985	5,556	5,349	5,856

Note: Figures based on scheduled departure times and actual passenger throughput. Peak hour demand refers to the busiest 60 minute period rather than a clock hour.

Table 7 below illustrates how DAA anticipates that as a result of peak demand certain airport facilities at Dublin Airport will be operating at full capacity into the future.

Year	2014	2015	2016	2017	2018	2019
Pier 4 Stands						
Pier 3 Stands						
Pier 2 Stands						
Pier 1 Stands						
West Apron						
Central A pron						
South Apron						
T2 Check in (1-28)						
T2 Check in (29-56)						
T2 Passenger Screening						
US Preclearance						
TSA						
T2 Immigration						
T2 Transfer Corridor						
T1 Check in						
T1 Passenger Screening						
T1 Immigration						

Some conacity issues may restrict growth	
Some capacity issues - may restrict growth	
Moderate capacity issues but growth	
No Significant Capacity Issues	

DAA believes that as an airport operator, DAA has a responsibility to ensure that adequate facilities are provided to satisfy this peak demand. In the short run DAA works to tailor its operational practices to maximise capacity but additional increases can only be achieved through capital investment in the longer term.

6.1 Differential pricing

In its Issues Paper, CAR has questioned whether there is a need for it to mandate differential pricing. It has suggested that differential pricing appears to have a number of attractions, allowing the airport operator to offer a more tailored service to users and making airport users more aware of the opportunity costs that their operations give rise to at the airport.

CAR suggested that there may be a case for asking

- users who want to make use of air bridges to pay higher charges to cover the costs of installing and maintaining such bridges, as is currently the case,
- users who want to fly at the busiest times of the day to pay more as a means of rationing demand at that time of the day and to contribute to the cost of providing additional capacity at those times.

DAA believes that as the airport operator it is critical that it retains the ability to respond to changing conditions at the airport in a way that meets the reasonable interests of users and that this requires the flexibility to structure airport charges as it deems appropriate within the confines of the price cap. On this basis DAA believes that differential pricing should not be mandated. Any decision by CAR to mandate differential pricing would mark a more interventionist approach to regulation and would represent an increase in CAR's involvement in the day-to-day management of the business. This would run counter to the requirements of Section 33(i) of the Act which requires CAR to have regard to imposing the minimum restrictions on DAA. This overall point having been made, we now proceed to discuss some of the issues involved in more detail.

Firstly, as CAR has correctly pointed out, under its current charging structure DAA does offer a range of differential prices for certain specific aeronautical services outside of the common passenger and runway movement charges. Different charges are levied in respect of different types of product and service: for example contact vs. remote parking and passenger charges; runway usage by MTOW; winter vs. summer. Other charges are levied per usage for a range of facilities such as check-in desks, airbridges, the CBP facility and airline lounges. Airlines can currently decide whether to use those facilities or not depending on their business models. If they choose to avail of these optional services they are required to pay additional charges, reflecting this use. Given that DAA intends to continue to offer this type of differentiated charging structure, this is no requirement for mandating such an approach.

DAA sets its airport charges in a transparent and non-discriminatory manner where it engages in an annual consultation process with all airline users relating specifically to the level and structure of airport charges for the forthcoming year. DAA is satisfied that within this overall framework there is sufficient flexibility under the current price cap structure to offer airlines a choice regarding optional services as outlined above. DAA does not believe that there is any requirement for users to agree to pay for additional services outside the price cap. Dublin Airport is focused on developing a compatible inter-operability model across its airport and between terminals as this model would be expected to provide the most potential for economies of scale for the business and its customers alike. In this regard, any mandatory move to differential pricing would be economically inefficient.

Secondly, DAA is opposed to the introduction of any mandatory peak pricing differential. DAA believes that it is the responsibility of the airport authority to provide appropriate facilities meeting the requirements of its airline customers irrespective of time of day. DAA is concerned that any attempt to impose a peak pricing structure at Dublin Airport could potentially distort the market as it would disproportionally affect a certain number of airline customers and could also have broader implications for the Irish aviation sector. As CAR acknowledged in its Issues Paper it was clearly proven in relation to the runway off peak charge mandated by CAR in the 2001 Determination that there are substantial practical difficulties and in some cases unanticipated implications likely to result from the implementation of any form of mandatory peak pricing structure. DAA also notes that when the possibility of mandatory peak pricing for Dublin Airport was last debated back in 2007, many of DAA's customers, Aer Lingus, bmi, IATA, Ryanair and ITIC were united in their opposition to such a measure.

6.2 Impact of differential pricing of peak on based airlines

Broadly speaking, the current peak period occurs in the morning between 06:00 and 08:00 (local time) as short haul aircraft based in Dublin depart for other destinations in Europe. In theory, peak load pricing would provide airlines and passengers with the incentives to shift demand to off-peak periods where aeronautical facilities are available. However in practice, for any home based airlines operating at the airport, the ability to operate their aircraft in the early morning peak is essential for their utilisation model, given that any base operator's incentive is to make the maximum use of its assets by maximising daily flying time. Given the home based carriers' imperative to operate in the peak hours, peak load pricing could not be introduced without substantial market effects specifically impacting these carriers. To avoid paying the extra charges, airlines would be unable to use their aircraft as efficiently as they would like. Thus, DAA is concerned that any attempt to impose a peak pricing structure at Dublin Airport could force airlines to either relocate their base away from Dublin Airport (either entirely or in part) or at a minimum deter the introduction of new Dublin-based aircraft.

It is acknowledged that efficient utilisation of short haul fleets can only be achieved by 'loading' the early morning peak, getting the aircraft generating revenue up in the air as soon as possible and permitting the maximum number of rotations per aircraft per day of the airport. In addition, given that Dublin Airport is on the western fringe of Europe with the differences in local time from Continental European destinations, the need to depart earlier is greater for Irish based airlines than for airlines based in Continental Europe which have the option of 'gaining time' on routes leading west²⁹. This effectively puts more pressure towards early morning departure and peak hour loading on airlines located in Ireland.

Imposing a peak pricing structure would run contrary to the work initiated this year in collaboration with Aer Lingus, Ryanair and the IAA to increase the capacity of the current main runway. NATS were brought in to assess the potential capacity of the main runway and they have reported that the capacity of the runway in the peak could potentially be increased significantly, with limited capital expenditure. Such an increase would allow carriers to grow in the current peak.

²⁹ A 07:00 local time departure from Paris can arrive in Dublin at 07:40 local time, facilitating an 08:10 return flight. On the other hand, a 07:00 local time departure from Dublin would arrive in Paris at circa 09:50 local time, facilitating a 10:20 return flight. So even with the current times, Dublin is losing out to continental hubs. Forcing airlines to move flights into the 08:00 hour would further disadvantage them and instead encourage them to not base aircraft in Dublin.

CAR has a statutory obligation to protect the interests of users and potential users of Dublin Airport however applying peak pricing would disproportionally hurt the airlines most committed to Dublin Airport i.e. airlines which have aircraft based in the airport. Stifling this growth potential for a hypothetical benefit to less committed airlines is an undesirable effect of peak pricing. Although CAR has suggested that peak pricing would protect users departing later in the day, this may not actually be the case. Most of the existing aeronautical revenue comes from airlines based in Dublin Airport. Non-based airlines, therefore, already benefit from the large quantities of passengers handled by the based airlines in Dublin Airport (which keeps airport charges relatively low compared to comparable airports in Europe). Unbalancing this relationship in favour of the non-based airlines through peak pricing may only hinder growth and backfire on the non-based carriers in the medium term. In other words, if based airlines are forced to pay higher charges for their optimal departure timeframe and thus discouraged from growing (contraction could result if the sub-cap is penal enough), DAA would have to rely more on the non-based airlines for more of its revenue in the medium to long term. With reduced growth from based airlines, the overall impact on the price cap calculation may be a higher price cap for all airlines.

The introduction of a mandatory peak pricing structure would not only impact on the operations of based airlines but it could also deprive the Dublin market of the significant advantages of a larger fleet of based aircraft, namely more new routes, more frequencies and greater competition. This is turn could be a broader negative for the Irish economy.

6.3 Practical difficulties of peak pricing implementation

CAR has acknowledged that there are practical problems that need to be addressed if differential pricing is to be introduced

- In DAA's view it would be difficult to calibrate differential pricing exactly to reflect accurately the relevant cost and usage factors. Such complexities are exacerbated by the single till, in which all aeronautical services are subsidised by commercial revenues, but at a global level, rather than at the level of the individual service.
- Aeronautical pricing is subject to consultation under the ACD and the process of changing prices takes a number of months. The cycle of annual consultation, followed by known pricing for the following two seasons is embedded at Dublin Airport and relied on by airlines for budgeting purposes. Within this framework, if mandated rigidities in price levels and/or relativities created perverse incentives or unintended deleterious consequences, the lead time for correction would be long and/or the existing processes for price-setting would have to be disrupted.

7. Financial Viability

7.1 Overview

In making a Determination, CAR is statutorily obliged 'to enable Dublin Airport Authority to operate and develop Dublin Airport in a sustainable and financially viable manner.'³⁰ Financial viability relates to the immediate and long-term sustainability of DAA's trading and financial positions. This encompasses a range of issues. The most pressing issue informing DAA's comments is that it faces a refinancing requirement of €700m over the course of the next Determination. To refinance DAA will need to access a volatile debt market that is highly sensitive to company credit metrics and ratings. Accordingly, while this issue is of paramount importance to DAA, the comments in this section are necessarily kept very brief and much of what is said must be retained as confidential. The relative brevity of the DAA's comments here is in no way a reflection of the relative importance of the issue.

The following are the key points which must be made:

- During the next regulatory period all DAA non-EIB debt facilities (€700m) will mature, namely:
 - €150m bank revolving credit facility expiring in December 2016;
 - €550m Eurobond which must be repaid in July 2018.
- This is a significant amount to refinance in the context of DAA's size, the concentration of its operations in one of Europe's peripheral economies and weak conditions (from a seller's perspective) in the market for debt of this type.
- DAA's current credit rating is BBB. This is three notches below the rating achieved in 2008 (A) when we last issued a significant new bond issue.
- Debt markets have at times been closed to Irish corporates over the period of the current Determination. Given its exposure to one of Europe's peripheral markets, DAA's expert advisors indicate that a minimum rating of BBB+ should be targeted in order for DAA to protect itself from market shocks and risks on tenor, higher cost, conditionality and financial covenants.
- At a low investment grade rating, the risk of being shut out of the markets remains.
- If DAA found the debt markets closed to it, this in return would require that the shareholder, the Irish Government, would inject equity into the business to support the continued operation of the airport.

³⁰ State Airports Act 2004, section 22, sub-section 4.

7.2 What is the market?

The following observations can be made with regard to the actual scope of the market which DAA will face:

• Many European banks still maintain embargoes on lending to Irish corporates.



7.3 What are the market dynamics?

It is instructive to focus on some the key debt-market dynamics as they affect DAA. The main issues to draw attention to are the following:

- The Sovereign crisis has removed the market benefit that being Government-owned had historically bestowed upon DAA.
- With very few Irish issuers, there is little evidence of improved sentiment on the part European corporate bond investors with regard to corporate Ireland's recovery.
- While DAA's bonds are currently marked at a spread of c. 175bp over the mid-swap rate, the price at which market-makers are able to facilitate small secondary market trades is not comparable with the supply conditions for a 'benchmark' amount of debt in the primary market.



- Even at BBB, corporates are at risk of suddenly being shut out of credit markets and BBB issuers in 'peripheral' countries face an even greater risk of this as the period from mid-2009 to January 2012 shows, during which no Irish corporate issuer managed to access the bond market. Where they can access the bond market BBB borrowers pay a premium, and this is compounded by the premium Irish companies also have to pay compared to similarly rated peers.
- Companies in peripheral countries are particularly at risk of downgrades outside of their control.

 As an occasional, small debt issuer with financial prospects highly dependent on Irish economic risk, DAA is open to more deal-execution risk and more vulnerable to negotiation of terms than other Western European utilities.



Figure 3: Comparison of Irish and European Corporate Bond Yields

Source: NERA analysis of Bloomberg and iBoxx data

7.4 Comments on DAA's relative financial health

In the Issues Paper, CAR comments that 'DAA's financial situation appears healthier today than in 2009'. This is a misinterpretation. While certain individual financial ratios have stabilised or improved marginally in 2012 compared with 2009, overall DAA's financial position shows a significant <u>adverse</u> change since 2009. This is reflected in DAA's current rating (BBB) being 2 notches below the rating achieved in 2009 (A-) at the height of the Irish financial contraction (and 3 notches below the rating achieved in 2008, at the last significant new bond issue). DAA's S&P financial risk profile has also weakened from 'Modest' to 'Significant'.

Further important points with regard to DAA's current financial health include the following:

• In light of the financial crisis of recent years, S&P has in effect increased the targets that DAA must meet for FFO:Net Debt at each rating band. For example, whereas in

2009 an A- rating could be achieved with an FFO:Net Debt ratio of 16-20%, DAA has remained at a BBB rating despite achieving ratios within that band in recent years.

- In considering financial ratios showing improvement since 2009, (DAA's EBITDA margin and EBITDA interest cover), it should be noted that DAA's EBITDA margin is still significantly below the rest of the sector and EBITDA interest cover is significantly below both the peer average and corporate norm of > 3.5x. S&P has previously highlighted concerns about DAA's weak profitability compared with its peers, concerns which feed into both ratings and outlook.
- Through a company-wide and extensive cost containment programme³¹ (negotiated with the trade unions and implemented from 2010) as well as positive ARI cash-flows, DAA managed to maintain EBITDA margin despite falling passenger numbers and weak economic conditions. However, this aggressive cost rationalisation across the business since 2009 leaves limited capacity for further cost reductions and in fact there are now upward pressures on opex, for instance in meeting security processing requirements.
- With reduced room for manoeuvre on cost, an adverse regulatory Determination, adverse trading conditions or economic shocks would make DAA vulnerable to a ratings downgrade, with the attendant implications, as indicated above. In simple, terms, at the current rating, the margin for downside is too low given the debt transactions which DAA must undertake in the immediate future.
- S&P's current rating system is subject to a recalibration exercise now running.



7.5 Behavioural incentives to financial viability maintenance

In its Issues Paper, CAR raised the question of behavioural incentives that might be put in place to support DAA in maintaining its financial viability. The on-going requirement to raise finance on the international debt markets is already one compelling behavioural incentive for DAA to maintain a strong financial viability profile. At present, DAA's profit metrics and interest cover are weaker than those of our peers. A key driver of this weakness is the inability of DAA to recover the significant capital costs of T2 as per the previous regulatory settlement. Therefore, any policy that allows DAA to reprofile its cashflows – supporting key cashflow ratios such as FFO:Net Debt – will underpin the rating and financial viability of the airport. DAA also welcomes the opportunity to assess potential policy options to reduce the risk profile of DAA and provide more robust support to the credit rating of DAA. Any such policy would need to deliver a material and significant change in risk profile from a rating agency and lender's perspective.

³¹ Under this programme 500 staff left the Group and voluntary pay cuts ranging from 5% - 12% were implemented.

7.6 Conclusion

In the current macro-economic climate a strong investment grade credit rating (minimum BBB+) is essential for DAA to maximise the likelihood of debt market access and achieve competitive refinancing terms, improving DAA's protection against risks on tenor, higher cost, greater conditionality and financial covenants.

8. Commercial Revenue

The term 'Commercial Revenue' as used by CAR refers to 'Commercial Revenue' + 'Retail Revenue' (for Dublin Airport) in DAA terminology. In this section we will use CAR's definition of commercial revenues.

Commercial revenues play an important role in supporting the financing and operation of Dublin Airport and DAA is committed to maintaining and growing this income stream. Detailed projections of anticipated commercial revenues for Dublin Airport will be submitted as part of the DAA regulatory proposition submission and we recommend that CAR commences its consideration of commercial revenues for the next Determination on the basis of DAA's forecasts. By basing its view of commercial revenues on analysis of these forecasts and the relevant market factors underpinning them, CAR's forecast will have a more market–based grounding than previously. This approach will also allow a clearer understanding of what factors, if any, have been modified between the DAA forecast and CAR's forecast and why.

8.1 Assessing Commercial Revenues

In assessing commercial revenues in its 2009 Determination, CAR developed an econometric model to project future revenues from this source. This single-factor model is based on the historic relationship between passenger numbers and commercial revenues. While there is of course a correlation between passenger numbers and the level of total commercial revenues generated at Dublin Airport, the strength of this relationship depends on both the degree of correlation for each sub-category of commercial revenue and the proportion it contributes to the total. The table below shows the likely relationship between passenger numbers and the factors underpinning the relationship.

Revenue Stream	Correlation to Pax	Relationship Description
Direct and Concession Retail	Strongly positive	 While a strong positive relationship exists between passenger numbers and direct and concession retail revenues this is somewhat offset by frequency of travel. The more frequently a passenger travels the lower their propensity to spend; i.e. they are less inclined to spend on each journey.
Car parking	Positive but weakening	 A positive relationship exists between passenger numbers and car parking revenues but this is weakening over time due to increased competition in the car-parking market and mode of transport substitution: additional 3rd party car park capacity

Table 8: Revenue to Passenger Volume Correlation

		 improved coach and bus services improved taxi services resurgent use of pick-up by family/friends. Passenger mix also impacts car parking revenues, e.g. non-Irish originating passengers do not park at the airport.
Property concession	Positive	 There is a positive link between passenger numbers and property concession income, e.g. income earned from car hire and banking concessions.
Property rents	No correlation	 Scheduled rent reviews refer to movements in market indices over the review period, not passenger numbers. Rents achieved on new or vacant lettings are dictated by market conditions locally and in Dublin city centre.

DAA believes that further investigation is needed to estimate the magnitude of these passenger/revenue relationships. This however should be as a complement to rather than instead of a bottom-up understanding of the revenue trends and realistic targets.

In addition to passenger numbers other factors such as disposable income levels, price competitiveness, exchange rate movements, passenger mix and operational practices also influence the level of commercial revenues. An assessment of the relative significance of these variables in relation to individual categories of commercial revenues over time and subsequent addition to the model would greatly improve the reliability of its outputs. However, the introduction of such additional variables would significantly increase the complexity, difficulty and resource requirements of the model to a level beyond, perhaps, what could be reasonably justified for the task it performs. For this reason DAA recommends that CAR use a bottom-up analysis with DAA submission as the starting point for its revenues analysis. The econometric model, in its current form, though updated, could then provide an additional sense check of the results of the bottom-up analysis.

8.2 Maintenance and growth of commercial revenues

Total Commercial revenues grew by c. €1m in real terms year-on-year from 2010 to 2011 and while this represents relatively static growth it was achieved during a period of negative economic conditions.

Contribution of T2

T2, which opened in November 2010 and was fully operational by March 2011, played a vital role in this performance. T2 allowed existing revenue streams to be maintained and added new and growing revenue streams to the commercial revenue portfolio. The impact of T2 on overall commercial revenues is show in Table 9.

Revenue Stream	Contribution of T2
Retail	 The opening of T2 served to drive up retail spend per passenger at a time when external economic factors were working to drive expenditure levels down. Retail income rose from in 2010 to 2012 despite the extremely adverse economic climate. In addition
Property Rentals	 Property Rentals solely related to T1 generated in revenues in 2010 the last year in which T2 was not fully operational. In 2011 rentals deriving from both T1 and T2 totalled and in 2012 an incremental increase of in real terms or 88% over 2010. This has been driven by the superior accommodation available in T2 and the location of new tenants operating new or expanded long haul routes out of T2.
Advertising	 Advertising made up c. of Property & Concessions revenues in 2009 before falling by a third to in 2010. The opening of T2 provided new advertising space and incremental sales of these sites saw advertising revenues rise to
Car-parking	 Since the construction of the T2 Multi Storey Car Park, Short Term parking revenue has increased from in 2010 to in 2012. DAA has used the additional short term capacity to offer a competitive and convenient car parking offering which has resulted in car park users switching to the higher yielding Short Term Car Parks, serving to mitigate the downward pressure on overall car-parking revenues. As a result the key performance indicator (KPI) for Car Parking, the average revenue per embarking passenger, has seen a reversal in the negative trend (in nominal terms) to 2010 and continues to trend positively. there was a change in the VAT rate applied to car-parking in 2012, from 21% to 23%. Had the VAT rate remained unchanged from 2011 to 2012 total car parking revenues (incl. VAT) would have shown a slight increase in 2012 (from 2012 was slight improvement we expect to see car parking revenues stabilising or growing modestly from the current base should passenger growth continue.

Other commercial revenues	 Other commercial revenues have grown from and in 2010 to in 2012. The previous spike in 2008 and 2009 on this revenue stream was due to the inclusion of PRM charges which, since 2010, are now reported as aeronautical revenues. The primary driver of the upward trend since 2010 in this category has been the opening of T2.

The maintenance of commercial revenues during the recent period of difficult economic conditions was significantly aided by the contribution of T2 to existing revenue streams and the wholly new revenue stream brought online through this facility, leaving DAA with a solid foundation to take advantage of a return to economic growth.

Contribution of T1

DAA is currently in the process of redeveloping its T1 retail space in order to improve and revitalise its approach to retailing at Dublin Airport. DAA plans to depart from its existing fragmented structure of multiple direct retail areas (Street, T1X, Piers 1-3) and consolidate its Direct Retail business within a single area. Under this plan it is envisaged that the area referred to as T1X will largely become a Food & Beverage area with some concession retail and will provide seating for passengers facilitating an improved passenger experience at Dublin Airport. T1X will continue to provide vital commercial space and essential terminal capacity and contribute to the overall maintenance and development of the commercial revenue contribution to airport charges into the future.

As the original retail composition of T1X, as envisaged back in 2009, will be considerably changed by this reconfiguration of T1, there are implications for the current regulatory treatment of T1X. The planned retail reconfiguration of T1 will render it increasingly difficult to calculate any meaningful forecast of incremental retail revenues linked back to 2009 and directly attributable to the specific area of the T1X facility. Due to this increased level of complexity and difficulty DAA believes the current regulatory treatment of T1X (which is predicated on such a forecast) will be inoperable and recommends a change to the treatment of this asset.

The difficulties already encountered in attempting to forecast incremental revenues from T1X provide evidence for the necessity of altering the regulatory treatment where this level of difficulty will increase due to T1 redevelopment. The current regulatory treatment requires that the T1X's incremental contribution be assessed and the depreciation profile recalibrated to remain airport charges neutral.

In its 2009 Determination CAR projected that T1X would generate incremental commercial revenues of about €5m per annum based on its analysis of outturn retail revenues before and after the opening of this terminal area. CAR adjusted its capital allowances by offsetting the capital costs of T1X in line with these estimated incremental commercial revenues to ensure that the T1X project had no impact on the price cap. The allowed capital costs became effectively the sum of

- a return on the average annual asset value of the T1X asset and
- a depreciation allowance based on the difference between the annual estimated incremental revenues from T1X and the annual T1X return.

This approach is reliant on the ability to be able to accurately identify and estimate incremental revenues associated with the T1X asset. Following the 2010 Aviation Appeal Panel decision relating to the treatment of T1X in the 2009 Determination, CAR undertook a further econometric analysis of the likely impact on retail revenues of the opening of T1X. This analysis suggested that T1X would generate a 7% uplift in retail revenue per passenger resulting in an estimated €23.3 million additional revenues between 2010 and 2014^{32} . This was slightly less than the projection of €5 million per annum and the 2009 Determination was adjusted accordingly. The T1 redevelopment, and its impact on T1X, would necessarily require an additional layer of complexity in an approach already shown to be difficult to implement in practice.

Together with the degree of difficulty another major disadvantage of this methodology is the additional risk it imposes on DAA, amounting as it does to a postponement of regulatory depreciation.

T1X is, and will continue to be, a valuable component of Dublin Airport's commercial and operational strategy but there are likely to be serious practical difficulties in attempting to continue with the current approach of projecting T1X incremental revenues. In future, the model would be likely to pick up variations in revenues caused by a number of different determining factors and not simply T1X. Given the centrality of T1X to the retail offering in T1 and the increasing complexity of the T1X regulatory treatment, DAA recommends that CAR adds the residual unremunerated value of T1X to the main Dublin Airport RAB allowing DAA to earn an annual return on capital and a depreciation allowance in a similar manner as other assets. This will eliminate the uncertainty and risk of error from the complex projection of notionally allocated incremental revenues and provide greater clarity and transparency in regard to the long term regulatory approach to this asset. This will serve to reduce the overall regulatory risk faced by the company.

Should CAR decide to continue with the current regulatory treatment significant changes to the econometric model will be required. The model used by CAR was based on a projection of retail revenue per passenger as a function of the historical value and the error term and is structured on the basis of the following assumptions:

- the past is a reasonable guide to the future,
- the monthly pattern in per passenger retail remains stable,
- a change in passenger numbers results in a proportional change in retail revenue,
- a one for one relationship between retail revenue growth and passenger numbers exists.

The underlying assumption of CAR's model is that the average retail revenue per passenger does not change in real terms - actual retail revenues are driven simply by passenger

³² 2009 prices

numbers and inflation. Given this assumption set, DAA believes that the current form of the model is not suitable for forecasting retail revenues over time since it does not take account of other key revenue drivers. Significant development of the model would be required to factor in additional relevant variables such as personal disposable income, consumer confidence, changing consumer patterns etc. should it continue to be required as part of the regulatory treatment of T1X, which however we do not recommend, and which we do not believe would be possible to achieve in a robust manner.



8.3 Hangar investment

8.4 Sub-caps at Dublin Airport

The purpose of economic regulation at Dublin Airport is to attempt, as far as possible, to replicate a competitive environment in setting the maximum level of airport charges while allowing DAA the same investment incentives that would be experienced by a competitive airport. Previously, CAR has considered single-till regulation to best approximate the conditions experienced by a competitive airport. A competitive airport is expected to reduce aeronautical charges in line with profits earned on commercial activities as, if it does not, it will lose out to airports that do. A competitive airport which does not seek to maximise commercial revenues will be unable to reduce aeronautical charges to the same extent as competitors who do and so will lose out to such competitors. In effect, if DAA does not seek to maximise commercial revenues it will be operating in a manner inconsistent with an airport operating in a competitive market. With respect to this, DAA believes that there is no requirement for a cap on any commercial revenue stream, including the cap on ATI fees as implemented in the last Determination, and recommends the removal of this cap.

In recommending the removal of the ATI fee cap the following relevant factors were also considered:

Materiality: ATI fees accounted for less than 1% of total revenues in 2012. In order to commit to a definite price path for ATI revenues DAA must attempt to provide accurate forecasts for future ATI revenues. These forecasts are made in the face of volatility of airline demand and require definite assumptions in relation to variables such as the airlines' likely usage of facilities and their elasticities of demand. Given the size of the revenue stream concerned it is questionable whether this level of resource commitment is merited.

Asymmetry of commitment: CAR requires DAA to commit to a definite price path for ATI fees, while not requiring users to provide any form of commitment on usage at that confirmed price level. DAA requires a degree of price flexibility in this area in order to effectively manage its airport facilities.

Inclusion in total: As part of the regulatory process, DAA already provides CAR with the company's best estimate of commercial revenues for the forthcoming regulatory period during each regulatory review. This commercial revenue forecast contains estimates of likely revenues arising from ground handling charges, including ATI fees. These revenue forecasts are used by the Commission in setting its assumptions which underpin its regulatory price cap for Dublin Airport. Therefore, under the existing regulatory structure, assumptions regarding future revenues from ATI charges are built into the commercial revenue assumption within the existing regulatory model.

Degree of regulation: The existing cap on ATI revenues means that in practice ATI fees are regulated under both the Aviation Regulation Act and S.I. 505 of 1998. This measure is inconsistent with the obligation of CAR to impose minimum restrictions on the airport authority in keeping with its statutory functions.

9. Operational Efficiency

DAA would like to respond to the following issues raised by CAR regarding operating expenditure and efficiency at Dublin Airport:

9.1 DAA operating cost performance 2010-2014;

9.2 Economies of scale at Dublin Airport;

9.3 Forecasting operating cost for the next Determination;

9.4 Efficiency Assessments –

- Indirect benchmarking,
- Direct benchmarking,
- Bottom-up assessments;

9.5 Pension Costs;

9.6 Rolling incentive mechanisms.

9.1 DAA operating expenditure performance 2010-2012³³

Following the publication of the 2009 Determination, it was apparent that DAA financial position was facing three substantial negative impacts gaps, totalling $\leq 106m$, where:

- CAR's operating cost allowance assumed an immediate cost reduction of €29m;
- CAR's treatment of T2 created a €55m gap between the cost of T2 and the remuneration for T2;
- there was a passenger gap of 1.1m between actual and CAR projected passenger volumes, giving rise to a revenue gap of €16m.

These financial gaps would have severely impacted DAA's key financial ratio of FFO:Net Debt and the return on the RAB

In order to address this, DAA introduced cash conservation which saw a reduction in the capex spend at Dublin Airport and is reflected in the underspend of the capex allowed in the 2009 Determination plus the following financial remedies

- A Cost Recovery Programme was initiated which targeted annual savings of €40m;
- Wage rates and terms and conditions for new T2 employees were negotiated to more competitive rates than had been envisaged by DAA and by CAR.

DAA set a target to reduce annual operating costs for the overall company (including Cork and Shannon Airports) by €40m. To achieve this level of savings, agreement was reached with the employees and trade unions to make savings of €37m in payroll.

As a result of these cost-saving measures the following substantial reductions to the Dublin Airport cost base were achieved by 2012:

• An annual payroll reduction of €41m compared to the 2008 cost base level. This was achieved primarily through a voluntary severance scheme and pay rate reductions.

³³ Figures in nominal terms

• In relation to non-payroll costs, savings of €9.5m were made arising from savings in Repairs and Maintenance, Energy Costs, Insurance Costs and Fees and Professional Services.

In addition by 2012, DAA had generated cost savings of &6.3m in payroll and &8.4m in nonpayroll in respect of the new T2 cost base. These factors in total culminated in overall cost savings of &65.7m. Separately, cost inflation factors were at work, some but not all of which had been allowed by CAR. The net impact of cost inflation, not allowed by CAR, was &5.4m. Summing all factors (see table below), DAA had achieved annual cost savings of &31.3m over and above the cost savings of &29m targeted by CAR.

Table 10: Outcome of DAA Cost Recovery Programme

	€m	€m
CAR Target savings		-29.0
Existing facilities Payroll savings	41	
Existing facilities Non-pay savings	9.5	
T2 Payroll savings	6.3	
T2 Non-pay savings	8.4	
Total DAA savings		65.7
Cost Inflation above CAR Assumptions		-5.4
Net opex position 2012		31.3

Comparison of CAR forecast to actual DAA outturn

The table below compares actual operating costs for Dublin Airport with CAR's operating expenditure allowance over the Determination period 2010 – 2012.

Table 11: DAA Opex Performance vs. Forecast 2010 - 2012

Overall Dublin Airport	2010	2011	2012	Total
CAR Forecast	198.0	206.8	215.1	619.9
Actual Costs	173.3	178.4	183.8	535.5
Savings	24.7	28.3	31.3	84.4
Less Restructuring Costs ³⁴				-57.9
Net savings				26.5

It is expected that the overall level of cost savings achieved over the period 2010-2012 will in the main be maintained. Hence these cost savings of circa €2.35 per passenger will continue to contribute to reduced airport charges in the 2015-2019 period. However the following factors will exert upward pressure on costs over the remainder of this Determination period.

³⁴ These €58m restructuring costs are the costs incurred by DAA in achieving payroll reductions.

- Security;
- Increased pension costs arising from resolution of the IASS;
- Energy price inflation;
- Rent and rates.

There are certain implications for the next Determination where:

- The success and extent of the cost reductions to the Dublin Airport cost base achieved between 2008-2012 was due to the timing and unique set of circumstances which prevailed, the extent of the rationalisation will make it exceedingly difficult to achieve further incremental cost savings over the next Determination period.
- In achieving the cost savings outlined above the regulated entity incurred restructuring costs which amounted to €57.9m for the period 2009 to 2012. CAR made no allowance for expenditure to achieve the efficiency targets it set in the 2009 Determination.
- The agreement made with staff allowing for payroll cuts of €6.1m included a restoration mechanism. The regulatory operating cost allowance will need to take account of this agreement going forward.

In its analysis of DAA's operating cost performance for 2001-2012, CAR suggests that:

Total operating expenditure is approaching the same level as in 2008 – DAA operating expenditure in 2012 at €186.2m was €3.5m lower than 2008 operating expenditure and some €30m lower than CAR had forecast for DAA following bottom up reviews by its consultants. Costs have been maintained at 2008 levels despite the addition of a second terminal, an additional pier and an increase in peak hour passengers.

But per passenger operating costs are at a level last seen a decade earlier – This is reflective of the fixed cost element to the Dublin Airport cost base. There is also upward pressure on average operating costs driven by the requirements of increasing peak passenger demand at Dublin Airport and ensuring that all our SQM metrics are met and that our overall quality of service remains at an appropriate level.

9.2 Economies of scale at Dublin Airport

DAA agrees with CAR that passenger volumes are a cost driver in relation to operating expenditure and that airports can experience the benefits of economies of scale given that there is less than full correlation between operating expenditure and passenger volumes. Economies of scale will be determined largely by the fact that a certain portion of Dublin Airport's operating cost base is fixed in the short term and therefore other things being equal the average fixed cost element of operating expenditure falls as it is spread over a higher passenger base.

However in order for an airport to be able to benefit from economies of scale it is essential that there is adequate spare capacity in the critical areas such as terminal, runway and airfield. When an airport experiences capacity shortages in its key infrastructural areas this will put upward pressure on operating costs as expenditure is incurred in dealing with congestion, reducing the opportunities for scale economies and potentially leading to diseconomies of scale. In the case of Dublin Airport the opportunity for achieving economies of scale can be hampered by the fact that passenger growth tends to occur predominantly during what are termed the peak hours and where capacity shortages build up despite the fact that there is available capacity in the airport during other non-peak hours. This means that in practice the airport could incur additional cost in satisfying peak airport demand which could mitigate some of the benefits of volume growth and reduce the extent of the opportunities for economies of scale.

While DAA acknowledges that there is a relationship between passenger volumes and certain categories of operating expenditure, DAA believes that within its operating cost base there are a number of factors relating to regulation/economy, physical infrastructure, external factors (e.g. energy costs etc.) and the company's business model, which are impacting on cost in addition to the costs driven by passenger growth.

9.3 Forecasting operating cost for the next Determination

Going forward in DAA's view, CAR should not base its operating expenditure analysis purely on a historically observed relationship between operating expenditure and passenger volumes as this would not reflect the complexity of the situation and would generate inaccurate results. At the outset, DAA believes that CAR should take DAA's operating costs projections as the basis for its regulatory operating cost allowance. However if CAR chooses to carry out its own operating expenditure forecast, it should start with an initial empirical assessment of the actual operating cost base. This can then be followed by an assessment of the passenger volume effect on the specific passenger related operating costs for the forecast period. A further adjustment for any known step-increases or other atypical increases to non-passenger related operating costs should then also be applied.

9.4 Efficiency assessments

In the Issues Paper, CAR refers to the many techniques which regulators can and have used to assess operating expenditure efficiency. It puts forward the use of both direct and indirect partial productivity measures as a top-down means of assessing the relative efficiency at Dublin Airport, where indirect measures look at Dublin Airport compared to other sectors in the economy and the economy as a whole while direct measures look at Dublin Airport compared to peer airports.

As previously outlined in 2008³⁵, DAA continues to believe that a bottom-up assessment of Dublin Airport provides a preferable basis for assessing the company's cost efficiency. DAA

³⁵ See DAA Response to CP6/2008

believes that top-down analyses such as indirect and direct³⁶ benchmarking can be useful for drawing high level comparisons and in highlighting specific areas for further bottom-up consideration but given their limitations they should not be used in isolation as the basis for determining operating efficiency targets.

DAA is concerned that both indirect and direct partial productivity indicators tend to:

- Look at a single comparative measure and do not 'normalise' (adjust)³⁷ comparator data to take account of numerous possible differences between the comparators which are being examined airports in the case of direct benchmarking or industries in the case of indirect benchmarking. Adjustments should be made for the range of activities insourced/outsourced by the airport, customer mix, the airport's stage in its investment life cycle, capacity availability, service quality, peakiness of traffic and levels of airport charges. This failure to normalise data when using partial productivity measures can substantially affect the emerging results.
- Fail to take account of the fact that each airport has a specific physical architecture which drives its cost base, airports as an industry tend to exhibit economies of scale and that different airports provide different levels of service quality.
- Take a subjective and often non-robust approach to the selection of comparator airports in the case of direct benchmarks or other sectors of the economy, and/or the economy as a whole in the case of indirect comparisons.

Therefore DAA believes that in order for either direct or indirect partial productivity indictors to be meaningful they must at a minimum be based on

- An appropriate selection process for comparator airports in the case of direct measures, i.e. only peer airports of a similar size operating in a comparative business environment should be selected.³⁸
- The data related to the comparator must be normalised as far as possible to take account of significant airport/industry differences in the case of both direct and indirect benchmarks.

However it should be noted that in practice it is extremely difficult to adjust for the many differences in airport operations and the various external factors that are likely to impact on operating costs at the different airports.

³⁶ Despite the reservations outlined above, DAA has continued to participate in the ACI-KPI project where a direct partial productivity exercise is carried out on an annual basis. In this exercise, a range of airports in Europe, together look at historical information, to try to understand the business drivers, and obtain information which may be of use to developing the business. As previously done in 2009, DAA is willing to provide CAR on a confidential basis with the most up to date version of the ACI-KPI indicators as part of its regulatory proposition submission.

³⁷ Normalisation is referring to the process of making appropriate adjustments in the data to ensure that the analysis is comparing like with like, in terms of the range of activities undertaken and the costs/revenues associated with these activities.

³⁸ The ACI-KPI Benchmarking study uses only European airports and divides them into peer groups based on passenger numbers where Dublin Airport is in the second grouping containing airports with annual passenger numbers of between 10-25 million per annum.

Indirect benchmarking

In its Issues paper, CAR examines labour cost trends for DAA and Ireland. In doing so, the *cost per FTE for DAA* is compared with *average earnings for* the *industry (excl. building*) sector over time. However the *cost per FTE for DAA* includes not only employee gross earnings but also Employer's PRSI which is subject to change outside the control of DAA. This figure is compared to *average earnings, Industry (excl. building)* which is based on gross employee earnings (not *average total labour costs*); therefore not including employer's PRSI. Here we can see the requirement for adjustments in like-for-like comparisons even when looking at such uncomplicated measures. It should also be considered if *industry (excl. building)* has similar capital intensity to the operations of Dublin airport and, if not, adjustment would be required to ensure relative capital intensity before comparison. There is also the question of whether *industry (excl. building)* is an appropriate comparator for Dublin airport given that firms in that sector may perform quite different types of work to that performed at the airport.

CAR then compared labour productivity trends for Dublin airport and three economic sectors – *industry (incl. building), industry (excl. building)* and *transport and storage*. However, no attempt appears to have been made to ascertain the capital intensity of each of the sectors and to adjust for any differences which may have arisen from this measure. A sector with high capital intensity will show a higher labour productivity for given amounts of gross value add than a sector with high labour intensity, all else being equal.

Similarly, even between sectors with little variability in capital intensity, the extent to which firms engage in outsourcing will distort the raw labour productivity reported and adjustments would be required to take account of this variability. There is no discussion of having assessed the impact of new technology introduction in the sectors selected for comparison which could shift the efficiency frontier only in those sectors where it is appropriate to apply the new technology. A sector having experienced a frontier shift through new technology will have greater productivity gains than sectors where the technology could not be utilised.

In summary, there are a number of issues arising from the use of such indirect partial productivity measures which need to be examined, and the base data adjusted appropriately, before they could provide a reasonable method of assessing Dublin Airport's efficiency.

Direct benchmarking

In its Issues Paper, CAR provides an update of its 2001 benchmarking exercise which was carried out by the firm of consultants IMG on behalf of CAR. As previously detailed, DAA had a number of serious concerns regarding this 2001 analysis specifically relating to where:

- IMG's analysis failed to take account of the differences between the activities that airports undertake directly.
- the use of the partial performance measures selected by IMG was subjective and non-robust.

• IMG ignored a number of potential other comparator airports and the inclusion of these airports would have significantly changed the results.

In order for this revised analysis to be validated the data used would need to be assessed and normalised. In addition the selection of comparator airports would need to be reviewed especially given that both Bristol Airport (5.7 mppa 2011) and Munich Airport (37.8mppa 2011) have been included, neither of which would be considered peer airports for Dublin Airport given their respective passenger throughputs.

Bottom-up assessments

DAA believes that a bottom-up analysis provides a better basis for assessing efficiency and can provide insights regarding the process management of the business.

A bottom-up analysis disaggregates the company into its component business processes. The processes can then be assessed for performance and cost.

DAA believes that a bottom-up assessment is useful where

- It can identify the most appropriate cost drivers. It also provides a means of identifying company-specific factors and assessing their impact at both the company and sub-company level.
- It can identify major activities so that the cost dynamics of each activity can be considered separately. Thus, instead of broad classifications of costs as being fixed or variable, controllable or non-controllable, the cost drivers for individual activities can be identified, along with any non-linear, step or fixed-cost dynamics.
- It provides a framework to link performance in particular activities to the financial performance of the company as a whole.
- It allows for increases in costs to be identified, and linked either to changes in cost drivers or the addition of specific new activities.
- It allows previous successes in cost reduction to be disaggregated into individual components.

In summary, DAA believes that a bottom-up assessment of Dublin Airport provides a preferable basis for assessing the company's cost efficiency. Top-down analyses may be useful for drawing high level comparisons, and in highlighting specific areas for further bottom-up consideration, but given the difficulty involved in ensuring that appropriate comparisons are being made they should not be used in isolation as the basis for determining operating efficiency targets.

9.5 Regulatory treatment of pension costs

Included in payroll costs for DAA are the costs of contributions to employees' pension scheme. Historically DAA has contributed to a multi-employer scheme, the Irish Airlines (General Employees) Superannuation Scheme ('IASS'), along with Aer Lingus and formerly SR Technics. This scheme has a large deficit and following complex and protracted separate and parallel employer discussions with employee representatives and the Labour Relations Commission ('LRC') and an ensuing Labour Court recommendation the scheme is set to be frozen and a new pension scheme will be set up for future service.

The deficit in the IASS arose due to a combination of the following:

- Reduction in value of the scheme's assets due to the reduction in equity values arising from the financial crisis;
- An increased life expectancy which has increased the liabilities of the scheme and which in effect meant that the existing contribution levels were insufficient;
- A reduction in the German Bond rate which is used to measure the liabilities of the scheme has increased their value; and
- Regulatory change introduced by the Pensions Board which makes final salary schemes more expensive for employers and employees.

The Trustees of the IASS have determined that the most appropriate approach to take in relation to the scheme is to freeze it to future service and 'derisk' it, to the extent possible, from future volatility in its investments. In relation to this past service, following the exhaustion of the industrial relations processes, the Labour Court has recommended that DAA compensates employees by reference to an amount equivalent to 65% of the loss of uncoordination benefits that are reduced.

For future service, the Labour Court has recommended that DAA increase its contribution rates to between 7% and 10% depending on the level of employee contribution. These rates are higher than DAA had originally proposed, however the Labour Court has recommended that DAA contribution rates are not lower than the Aer Lingus proposal of 10%. This increase in contribution rates will increase the payroll costs for DAA but are necessary to fund sustainable pensions for the employees. The unsustainability of the current contribution levels has been evidenced by the large deficit that arose in the IASS.

DAA maintains, as it has done in previous determinations, that the cost of the efficient operation of Dublin Airport includes the cost of providing a sustainable pensions for employees and as such the increased pension costs for both past and future service should be included in the operating costs building block. In CP3/2005 CAR noted that *'the Commission accepts, as a matter of principle, that users should bear the efficient costs of remunerating the DAA's employees at Dublin Airport, including pension costs'.*

9.6 Rolling incentive schemes

In the 2009 Determination, CAR introduced an operating expenditure rolling incentive scheme aimed to encourage DAA to realise any efficiency as soon as it is feasible and practical to do so. CAR stated that the purpose of this scheme was to allow DAA to keep any savings for a fixed number of years after the saving is first realised, independent of when the next price cap was due to be set. The scheme operates by 'rolling-forward' the value of any savings first made in years two, three, four and five into the next regulatory period such that the value of such savings would be retained for the equivalent of five full years before pass through. Under this scheme DAA is to enjoy the same benefits whenever in the regulatory cycle it realises a cost saving.

DAA performance 2011-2012

CAR applied rolling incentives to five payroll areas for the 2010-2014 regulatory period (airfield services, car parks, commercial, and support services at Dublin Airport and DAA shared costs or head office). As outlined above, in overall terms, Dublin Airport's operating costs are lower than forecast by CAR, however savings within the individual cost categories have fluctuated somewhat. Despite this, early indications would suggest that DAA will be putting forward cost savings under the airfield service, car parks and support services categories for inclusion in the rolling incentive scheme.

Application of the Rolling Incentive Scheme

In applying the rolling incentive scheme in the next Determination, CAR has suggested two alternative methodologies, DAA would favour option 2 where an estimate for the projected operating costs in the relevant rolling incentive categories would be made but an upward adjustment would be applied to account for where DAA had beaten the rolling scheme target within the last five years. DAA believes that the alternative option 1 has no logical basis and might prove difficult to apply in practice where decisions would have to be made regarding adjustments for various factors such as traffic growth, inflation indexation and other external variables. In addition, DAA recommends that the rolling incentive scheme be applied on an individual cost category basis in order to maximise the incentivisation properties of this scheme.

Rolling incentives for the 2015-2019 regulatory determination

CAR applied Rolling Incentives to five operating expenditure areas for the 2010-2014 Determination (airfield services, car parks, commercial, and support services at Dublin airport and DAA shared costs or head office). DAA would support the extension of these incentives into all areas in which DAA has control over the relevant operating cost. DAA would see this as including all payroll costs, and all nonpay costs with the exception of Rates, Insurance, CAR costs and Aviation Customer Support.

In addition, DAA believes that the rationale for including rolling incentives in operating expenses also applies to commercial revenues and would welcome the expansion of rolling incentives into areas of commercial revenues in which DAA has full control over the level of income and where the impact of passenger variances are excluded. As the structure of the price cap formula allocates volume risk to Dublin Airport, including the volume impact on

commercial revenues, this would result in a double count of the impact of these variances and would not reflect the performance of Dublin Airport's management of commercial revenue. This would impact retail, car parking and property concessions revenues. Therefore in setting a commercial revenue rolling incentive scheme CAR would have to adjust for this volume effect. DAA recommends that if CAR decides to apply a rolling incentive scheme to these commercial categories, that it uses revenue per passenger as the basis for its assessment to eliminate this volume impact.

The following table sets out an example of how such an incentive scheme might work. In the example, DAA has performed as CAR forecast however with a lower number of passengers due to an increase in margin per passenger of $\notin 0.13$. The improved margin per passenger would be rolled forward into the following determination period (i.e. if CAR sets a passenger forecast of 21m in the following determination, a rolling incentive of $\notin 2.7m$ ($\notin 0.13 * 21m$) would apply).

	Outturn	Per Determination	Variance
Passengers ('m)	19.0	20.0	-1.0
Retail GM (€m)	50.0	50.0	0.0
Retail GM per pax (€)	2.63	2.50	0.13

Table 12: Retail Gross Margin Variance to Forecast

9.7 Summary responses to CAR's opex questions

Generally, throughout this document, DAA has responded to CAR's questions and comments as part of the presented narrative. In the case of opex, it may be useful to summarise the responses vis-à-vis CAR's direction questions.

How responsive is opex to changing passenger numbers?

Passenger volumes are a cost driver in relation to operating expenditure, but a one-to-one relationship does not exist between these factors. As a result airports can experience the benefits of economies of scale given that there is less than full correlation between operating expenditure and passenger volumes. Economies of scale will be determined largely by the fact that a certain portion of Dublin Airport's operating cost base is fixed in the short term and therefore other things being equal the average fixed cost element of operating expenditure falls over a higher passenger base.

However, in order for an airport to capture the benefits of scale economies it needs to have adequate spare capacity in the critical areas such as terminal, runway and airfield. When an airport experiences capacity shortages in its key infrastructural areas this will put upward pressure on operating costs as expenditure is incurred in dealing with congestion and its associated costs, reducing the opportunities for scale economies and potentially leading to diseconomies of scale.

How significant are economies of scale and how might the efficiency frontier shift in response to changing passenger numbers?

In the case of Dublin Airport the opportunity for achieving economies of scale can be hampered by the fact that passenger growth tends to incur predominantly during what are termed the peak hours and where capacity shortages build up despite the fact that there is available capacity in the airport during other non-peak hours. This means that in practice the airport will incur additional cost in satisfying peak airport demand mitigating the benefits of volume growth and reducing the overall significance of economies of scale.

Aside from passenger numbers what factors should we consider in assessing how responsive opex is? How do individual operating costs respond to passenger levels and other factors?

DAA believes that a bottom-up analysis can provide the most comprehensive insights into the cost drivers of individual business activities. Such an analysis disaggregates the company into its component business processes, allowing them to be assessed for performance and cost. In this way, the cost drivers of the activities of the business, and hence for the business as a whole, can be identified and the strength of their impact on cost measured.

What is the potential for 'catch up' by the DAA so as to realise efficient operating costs?

DAA has made considerable cost savings over the period 2010-2012 as a result the opportunities for further rationalisation are now limited. Nevertheless DAA continues to strive to maximise its operational efficiency.

What allowance should we make for operating costs as Dublin Airport after 2014?

As part of its forthcoming regulatory proposition DAA will submit to CAR its forecast for operating expenditure. DAA recommends that this is used as the basis for allowing for operating costs after 2014.

10. Other Issues

10.1 Shannon Airport's separation from the DAA Group

In 2012, pursuant to the State Airports Act 2004, the Government decided that:

- Shannon Airport was to be separated from DAA.
- The existing ownership of Cork Airport by the Company would be maintained for the present.
- DAA would be renamed to reflect the fact that there are now two airports.

Pursuant to the Government decision the Shannon Airport business was transferred to Shannon Airport Authority plc, a separate state-owned entity, with effect from 31 December 2012. A dividend in specie of ≤ 105.5 million was effected by the transfer of the Shannon Airport business, related assets, liabilities and certain of its employees to SAA in consideration for the issue by SAA of one ordinary share of ≤ 1 in its share capital to the Minister for Public Expenditure and Reform, being the beneficial holder of the entire issued share capital of DAA.

The two ways in which Shannon Airport historically would have impacted on the regulatory process and the price cap in Dublin Airport were:

- The allocation of head office costs;
- The inclusion of Shannon Airport debt and cash flows in the assessment of the financeability of Dublin Airport.

Treatment of Head-Office costs

In the past Determination CAR allocated costs between the airports on the basis on passenger levels in 2008. This was at a point where Shannon Airport's passenger numbers were at an unsustainably high level. In 2008 Dublin Airport handled 78.5% of the passengers at DAA Airports; however, by 2012 this figure had increased to 83.6%.

DAA's cost base is organised such that the costs of running the day to day operations of the airports are held within each airports location i.e. Dublin, Cork and Shannon each contained the costs of running the airport plus the support costs (i.e. human resources or finance) directly related to running the business and only the truly Group costs are contained in the Shared Costs (Head Office).

Impact on financeability of Dublin Airport

The separation of Shannon Airport has not had an impact on the financeability of Dublin Airport. While Shannon Airport has historically delivered a negative cash flow to the Group, restrained capital expenditure had brought the business to a cash neutral position (excluding interest) for the period 2010 to 2012 with EBITDA covering the cost of capital expenditure. There would have been no impact on DAA's key financeability ratio of FFO: Net Debt each year over the period 2009 to 2012 if Shannon Airport was not in the DAA Group for this period.

Shannon Airport was separated on a debt free / cash free basis; as such the debt attributed to Shannon Airport is retained by the DAA Group. DAA believes that the financeability of Dublin Airport should be assessed based on the debt and cash flows generated by the regulated entity. As this debt was not incurred by the regulated entity, DAA would not expect it to be included in the financeability consideration.

10.2 CAR questions and statements not addressed elsewhere

Throughout its Issues Paper CAR posed a series of questions on principles and practice for current and future regulation to potential respondents. In this response we have endeavoured to provide CAR with a comprehensive response to the issues raised. There remain a small number of questions not addressed elsewhere which we will cover in this section, as well as some further comments on statements (rather than questions) by CAR not addressed elsewhere.

Comparator airports

CAR asks 'What airports constitute suitable comparators for Dublin Airport?' and 'What criteria should guide us when developing a peer group for Dublin Airport?' In developing a peer group for Dublin Airport CAR should seek to include airports comparable to Dublin Airport on the key criteria of size, passenger mix, business environment, airport architecture, range of activities and service quality.

Capex triggers

In discussing capex triggers CAR addresses both the general 'Under what circumstances, if any, should we make use of trigger allowances for capex?' and the particular 'Should we retain, modify or abandon the current runway and apron triggers if they have not been met by end 2014?' DAA supports the continued use of capital expenditure triggers in the 2015 Determination. It believes that capital expenditure triggers can be helpful in facilitating the efficient and timely development of airport facilities. Needless to say, the trigger itself has to be set accurately for the trigger mechanism to be beneficial. Moreover, not all capital investment would be suitable for trigger treatment.

DAA believes that it is appropriate to revisit the current triggers to ensure that they are appropriately specified. This should not always be the case, i.e. in some circumstances it would be appropriate for a trigger from a previous Determination to remain unaltered into the new Determination period. In the case of the runway trigger in particular, recent experience with regard to peak demand and the relationship between peak demand and total demand suggests that the runway trigger should be specified in peak-use terms, which is what DAA argued on previous occasions. The current work on runway capacity enhancement (involving DAA, airlines and the IAA) is yielding promising results with regard to the possibility of expanding peak capacity. DAA would wish to see this phase of work completed, and the runway trigger revisited in the light of what emerges.

CAR statements on commercial revenues

While agreeing with the broad thrust of the following statements made by CAR in relation to commercial revenues at DAA, we believe the discussion will be deepened by the provision of additional information to add context to the headline.

CAR states that net commercial revenues account for 40% of total revenues at Dublin Airport, compared with 48% for European Airports (ACI Europe Economics Report 2011, 2010 performance). While the proportion of revenues from non-aeronautical revenues rose slightly for European airports (from 47% to 48%) from 2009 this was against a background of GDP growth of 2.1% for the EU (2% for the Eurozone)³⁹. As commercial revenues are a more discretionary income stream it would be expected that they would rise faster than aeronautical revenues in periods of GDP growth and, therefore, would represent an increasing proportion of total revenues, all else being equal. As the Irish economy was moving in the opposite direction to the overall EU (and Eurozone) in 2009-2010 it is not surprising that commercial revenues in Dublin Airport would show a decline in proportion of total revenues (from 45% in 2009 to 42% in 2010).

It should be noted that of the 157 airports included in the ACI Europe Economics Report 2011, 48% were not profitable. Loss-making was concentrated among the smaller airports (75% loss-making). It is likely that these airports have a greater proportion of revenues derived from non-aeronautical activities than average, given their popularity with LCCs and the LCC business model. As loss-making appears to correlate with a lower proportion of revenues earned from aeronautical activities, this is not necessarily a direction in which DAA would wish to move.

Also in relation to the ACI Europe Report 2011 CAR comments that shares of income from retail, property and car parking at Dublin Airport are in similar proportions to the average for European airports and where Dublin differs is the relatively low level of income it collects from other sources, which can include fuel concessions, ground transport, divestments, and exceptional items at some airports (Issues Paper, p 41). Although it is difficult to be definitive, without knowing the magnitude of the divestments and exceptional items within the other commercial revenues figure (which are non-recurring), as to why Dublin Airport derived proportionally less income from this source that other airports in 2010 a few general points should be considered:

- The other commercial revenues figure in the ACI Europe Economics report includes revenues from fuel operators. Dublin Airport reports these revenues under property rather than in the other commercial revenues category. There would be an uplift in the range of on 'other commercial revenues' if fuel operators revenue was reported in this category.
- A large proportion (approx.) of other commercial revenues at Dublin airport are passenger driven, e.g. CBP and VIP lounges. Given the depth of the Irish recession and the consequent fall in passenger numbers in 2009 (-12.6%) and 2010 (-8.6%)

³⁹ http://epp.eurostat.ec.europa.eu

revenues from these sources were negatively impacted. In contrast, European passengers grew by 4.2% in 2010 which could be expected to boost other commercial revenues that are passenger driven.

 This illustrates the difficulty in making a direct comparison of revenues even across peer airports. Although the comparator (other commercial revenues) appears the same for each airport in fact it does not contain the same elements causing the comparison to be distorted. Disparities in reported cost categories can, in the same vein, distort attempts at direct cost or efficiency comparison between companies. Also, by failing to take account of the country factor, a key revenue driver – GDP, is not factored into the comparison.

Finally, CAR notes also that the decline in car parking revenues has continued (Issue Paper, page 42), and DAA has taken active steps to manage this negative trend caused by a combination of passenger reductions, competitive pressures on price and market share and mode of transport substitution.

In 2006 car-parking revenues (long term & short term only) were in real terms and this has declined to in 2012. Over this period passenger numbers at Dublin Airport declined by 9% and this alone would have caused a drop in car parking revenues, all else being equal. However, the emergence of off-site car parking competition contributed more significantly to this decline. In 2006, the DAA retained for the market which has declined to less than for in 2012. This competition has translated into pricing pressures in an extremely competitive market. In total, the drop in passenger numbers, market share and price pressure account for for the revenue reduction. The remaining is due to transport mode shift. From passenger research, it was noted that there has been a big shift in mode of transportation to/from the airport. In 2006, 48% of passengers arrived at the airport by private car as opposed to a corresponding figure of 45% in 2012.

In 2010, as passenger decline compounded existing competitive pressures, a decision was made to halt the decline in revenues, realign the business and drive volumes. Resulting from this decision has been the introduction of in-path with the airlines as a sales channel for car parking, emphasis placed on on-line promotion, increased marketing awareness and campaigns and significant yield management all contributing to stabilising the average revenue per pax. In addition to the above there was a change in the VAT rate applied to car-parking in 2012, from 21% to 23%. Had the VAT rate remained unchanged from 2011 to 2012 total car parking revenues (incl. VAT) would have shown a slight increase in 2012 (from As our underlying performance in 2012

was slight improvement we expect to see car parking revenues stabilising or growing modestly from the current base should passenger growth continue.