Determination on Maximum Levels of Airport Charges at Dublin Airport

Commission Paper 4/2009

4 December 2009

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Foreword

1. This is the third Determination on the maximum level of airport charges made by the Commission for Aviation Regulation and the second made since the enactment of the State Airports Act, 2004. This Determination applies to airport charges that the Dublin Airport Authority (the DAA) may levy at Dublin airport for the years 2010 to 2014 inclusive.

2. As during previous determinations, there has been a significant level of information exchange between the Commission, the DAA and various interested parties in making this Determination. In addition, the Commission again retained a number of consultants and also consulted with users on a number of critical issues. I would like to thank all parties who made representations. The views received significantly assisted the Commission in discharging its statutory functions.

Cathal Guiomard
Commissioner

4 December 2009

Price Cap

The Dublin Airport Authority ("the DAA") shall ensure that, for each year of the regulatory period 2010–14, the level of revenue collected from airport charges, expressed as a *per passenger yield*, does not exceed the *maximum permitted revenue per passenger, P_t,* as set out by the following formulae. In the event that the DAA should collect more than permitted, it shall arrange to rebate users within 45 days of the year ending a sum sufficiently large such that the revenues collected net of this sum, on a per passenger basis, do not exceed the maximum permitted revenue per passenger.

Regulatory period 1 January 2010 to 31 December 2010

The maximum permitted revenue per passenger for the regulatory period 1 January to 31 December 2010 shall be equal to:

$P_{2010} = [€8.93 + T2_{2010}] * QS_{2010}$

Where:

$T2_{2010}$ is an increase in the maximum permitted revenue per passenger allowed if T2 becomes operationally ready in 2010.

$T2_{2010}$ = €2.33 * (*Number of days in 2010 T2 operationally ready) / 365*

QS_{2010} represents a *Quality of Service* adjustment that takes a value between 0.965 and 1 depending on how many service quality targets the DAA manages to achieve. It equals 1 if the DAA achieves all the targets. If the DAA failed to meet any target, it would equal 0.965 and the level of permitted revenues would be 3.5% lower.

QS_{2010} = one minus the sum of

0.0005 * number of days in 2010 when passengers in a terminal that is open have to queue for more than thirty minutes to pass through passenger security, subject to this sum never exceeding 0.015 (1.5%); plus

0.00025 * number of days in 2010 when access to the outbound element of the baggage handling system is denied to an airline or airlines for more than thirty consecutive minutes due to a single event system failure, subject to this sum never exceeding 0.0075 (0.75%); plus

0.000625 * number of quarters in 2010 when the incoming element of the baggage handling system is available for less than 99% of operational hours, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.7 in the '*ease of way-finding through airport'* category of the Airport Council International ("ACI") airport service quality survey ("ACI survey") in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*flight information screens*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.6 in the '*cleanliness of airport terminal*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.3 in the '*cleanliness of washrooms*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.0 in the '*comfort of waiting/gate area*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%); plus

0.00025 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*courtesy/helpfulness of airport staff (excluding check-in & security)*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.0005 (0.05%); plus

0.000375 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the 'c*ourtesy/helpfulness of security staff*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00075 (0.075%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.5 in the '*all passengers' overall satisfaction with the airport*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.1 in the '*communications/ telecommunications/e-facilities*' category of the ACI survey in the first two quarters of 2010, such that the value never exceeds 0.00125 (0.125%).

Regulatory period 1 January 2011 to 31 December 2011

The maximum permitted revenue per passenger for the regulatory period 1 January to 31 December 2011 shall be equal to:

$P_{2011} = [(€8.11 + T2_{2011} + Trigger_{2011}) * (1 + CPI_{2010}) + k_{2009} + w_{2009}] * QS_{2011}$

Where:

$T2_{2011}$ is an increase in the maximum permitted revenue per passenger allowed if T2 becomes operationally ready in 2010 or during 2011.

$T2_{2011}$ = €2.33 * (*Number of days in 2011 T2 operationally ready) / 365*

$Trigger_{2011}$ is an increase in the maximum permitted revenue per passenger arising should triggers for additional capital projects be met.

$Trigger_{2011}$ = the sum of

€0.89 if annual passenger numbers at Dublin airport in 2010 exceed 23.5 million (*the runway trigger*), or €0.00 otherwise; plus

€0.07 if there is a week in 2010 when demand for aircraft stands was greater than 74 (*the apron development trigger*), or €0.00 otherwise; plus

€0.07 if legislation requires the DAA to upgrade its Dublin airport baggage security equipment prior to the end of 2011 (*the HBS trigger*), or €0.00 otherwise.

CPI_{2010} is the percentage change (whether of a positive or negative value) in the consumer price index between that published in October 2009 and October 2010.

k_{2009} is a correction per passenger to be made in the regulatory year 2011 on account of any over or under collection by the DAA in the regulatory year 2009. It is derived from the following formula:

$$k_{2009} = (€7.39 – Y_{2009}) * (Pax_{2009}/22{,}947{,}301) * 1.0101 * (1+ I_{2010})$$

where Y_{2009} is the actual average revenue per passenger collected from airport charges levied at Dublin airport in 2009, Pax_{2009} is the number of passengers using Dublin airport during 2009, and I_{2010} is the average daily three-month interest rate between 1 November 2009 and 1 November 2010 using the Euribor rate or some other suitable measure.

w_{2009} is a correction per passenger to be made in the regulatory year 2011 on account of any difference for the year 2009 between the Commission's actual costs and expenses and budgeted costs and expenses that are recoverable through airport charges levied at Dublin airport. It is derived from the following formula:

$$w_{2009} = €0.0200 * (1+ I_{2010})$$

QS_{2011} represents a *Quality of Service* adjustment that takes a value between 0.955 and 1 depending on how many service quality targets the DAA manages to achieve. It equals 1 if the DAA achieves all the targets. If the DAA failed to meet any target, it would equal 0.955 and the level of permitted revenues would be 4.5% lower.

QS_{2011} = one minus the sum of

> 0.0005 * number of days in 2011 when passengers in a terminal that is open have to queue for more than thirty minutes to pass through passenger security, subject to this sum never exceeding 0.015 (1.5%); plus
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> 0.00025 * number of days in 2011 when access to the outbound element of the baggage handling system is denied to an airline or airlines for more than thirty consecutive minutes due to a single event system failure, subject to this sum never exceeding 0.0075 (0.75%); plus
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> 0.000625 * number of quarters in 2011 when the incoming element of the baggage handling system is available for less than 99% of operational hours, such that the value never exceeds 0.0025 (0.25%); plus
>
> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.7 in the '*ease of way-finding through airport'* category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%); plus
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> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*flight information screens*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%); plus
>
> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.6 in the '*cleanliness of airport terminal*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%); plus
>
> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.3 in the '*cleanliness of washrooms*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.0 in the '*comfort of waiting/gate area*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%); plus

0.00025 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*courtesy/helpfulness of airport staff (excluding check-in & security)*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.001 (0.10%); plus

0.000375 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the 'c*ourtesy/helpfulness of security staff*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0015 (0.15%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.5 in the '*all passengers' overall satisfaction with the airport*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.1 in the '*communications/ telecommunications/e-facilities*' category of the ACI survey in the last two quarters of 2010 and first two quarters of 2011, such that the value never exceeds 0.0025 (0.25%).

Regulatory period 1 January 2012 to 31 December 2012

The maximum permitted revenue per passenger for the regulatory period 1 January to 31 December 2012 shall be equal to:

P_{2012} = [(€7.90 + $T2_{2012}$ + $Trigger_{2012}$) * (1 + CPI_{2011}) + k_{2010} + w_{2010}] * QS_{2012}

Where:

$T2_{2012}$ is an increase in the maximum permitted revenue per passenger allowed if T2 becomes operationally ready before end of 2011 or during 2012.

$T2_{2012}$ = €2.33 * (*Number of days in 2012 T2 operationally ready) / 366*

$Trigger_{2012}$ is an increase in the maximum permitted revenue per passenger arising should triggers for additional capital projects be met.

$Trigger_{2012}$ = the sum of

€0.89 if annual passenger numbers at Dublin airport in a 12-month period prior to the end of 2011 exceed 23.5 million (*the runway trigger*), or €0.00 otherwise; plus

€0.07 if there is a week in 2010 or 2011 when demand for aircraft stands is greater than 74 (*the apron development trigger*), or €0.00 otherwise; plus

€0.07 if legislation requires the DAA to upgrade its Dublin airport baggage security equipment prior to the end of 2012 (*the HBS trigger*), or €0.00 otherwise.

CPI_{2011} is the percentage change (whether of a positive or negative value) in the consumer price index between that published in October 2009 and October 2011.

k_{2010} is a correction per passenger to be made in the regulatory year 2012 on account of any under collection (capped at 5%) by the DAA in the regulatory year 2010. It is derived from the following formula:

$$k_{2010} = \text{minimum}[(P_{2010} - P_{2010,\ \text{outturn}}),(0.05 * P_{2010})] * (1+ I_{2010}) * (1+I_{2011}) / Pax_{2012}$$

where $P_{2010,\ outturn}$ is the outturn revenue per passenger in 2010; Pax_{2010} and Pax_{2012} are Commission forecasts for total annual passengers at Dublin airport in 2010 and 2012 respectively, as set out in this Determination; I_{2010} is the average daily three-month interest rate between 1 November 2009 and 1 November 2010 using the Euribor rate or some other suitable measure, and I_{2011} is the average daily three-month interest rate between

1 November 2010 and 1 November 2011 using the Euribor rate or some other suitable measure.

w_{2010} is a correction per passenger to be made in the regulatory year 2012 on account of any difference for the year 2010 between the Commission's actual costs and expenses and budgeted costs and expenses that are recoverable through airport charges levied at Dublin airport. It is derived from the following formula:

$$w_{2010} = [WA_{2010} - WF_{2010} * (1+CPI_{2010}))] * (1+ I_{2010}) * (1+I_{2011}) * (Pax_{2010} / Pax_{2012})$$

where WA_{2010} is the Commission's actual costs and expenses in 2010 that are recoverable from airport charges levied at Dublin airport, and WF_{2010} is the Commission's budgeted costs and expenses for 2010 that are recoverable from airport charges levied at Dublin airport.

QS_{2012} represents a *Quality of Service* adjustment that takes a value between 0.955 and 1 depending on how many service quality targets the DAA manages to achieve. It equals 1 if the DAA achieves all the targets. If the DAA failed to meet any target, it would equal 0.955 and the level of permitted revenues would be 4.5% lower.

QS_{2012} = one minus the sum of

> 0.0005 * number of days in 2012 when passengers in a terminal that is open have to queue for more than thirty minutes to pass through passenger security, subject to this sum never exceeding 0.015 (1.5%); plus
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> 0.00025 * number of days in 2012 when access to the outbound element of the baggage handling system is denied to an airline or airlines for more than thirty consecutive minutes due to a single event system failure, subject to this sum never exceeding 0.0075 (0.75%); plus
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> 0.000625 * number of quarters in 2012 when the incoming element of the baggage handling system is available for less than 99% of operational hours, such that the value never exceeds 0.0025 (0.25%); plus
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> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.7 in the '*ease of way-finding through airport'* category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%); plus
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> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*flight information screens*' category of

the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.6 in the '*cleanliness of airport terminal*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.3 in the '*cleanliness of washrooms*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.0 in the '*comfort of waiting/gate area*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%); plus

0.00025 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*courtesy/helpfulness of airport staff (excluding check-in & security)*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.001 (0.10%); plus

0.000375 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the 'c*ourtesy/helpfulness of security staff*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0015 (0.15%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.5 in the '*all passengers' overall satisfaction with the airport*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.1 in the '*communications/ telecommunications/e-facilities*' category of the ACI survey in the last two quarters of 2011 and first two quarters of 2012, such that the value never exceeds 0.0025 (0.25%).

Regulatory period 1 January 2013 to 31 December 2013

The maximum permitted revenue per passenger for the regulatory period 1 January to 31 December 2013 shall be equal to:

P_{2013} = [(€7.70 + $T2_{2013}$ + $Trigger_{2013}$) * (1 + CPI_{2012}) + k_{2011} + w_{2011}] * QS_{2013}

Where:

$T2_{2013}$ is an increase in the maximum permitted revenue per passenger allowed if T2 becomes operationally ready before end of 2012 or during 2013.

$T2_{2013}$ = €2.33 * (*Number of days in 2013 T2 operationally ready) / 365*

$Trigger_{2013}$ is an increase in the maximum permitted revenue per passenger arising should triggers for additional capital projects be met.

$Trigger_{2013}$ = the sum of

€0.89 if annual passenger numbers at Dublin airport in a 12-month period prior to the end of 2012 exceed 23.5 million (*the runway trigger*), or €0.00 otherwise; plus

€0.07 if there is a week in 2010, 2011 or 2012 when demand for aircraft stands is greater than 74 (*the apron development trigger*), or €0.00 otherwise; plus

€0.07 if legislation requires the DAA to upgrade its Dublin airport baggage security equipment prior to the end of 2013 (*the HBS trigger*), or €0.00 otherwise.

CPI_{2012} is the percentage change (whether of a positive or negative value) in the consumer price index between that published in October 2009 and October 2012.

k_{2011} is a correction per passenger to be made in the regulatory year 2013 on account of any under collection (capped at 5%) by the DAA in the regulatory year 2011. It is derived from the following formula:

$$k_{2011} = \text{minimum}[(P_{2011} - P_{2011,\ \text{outturn}}),(0.05 * P_{2011})] * (1+I_{2011}) * (1+I_{2012}) * (Pax_{2011} / Pax_{2013})$$

where $P_{2011,\ \text{outturn}}$ is the outturn revenue per passenger in 2011; Pax_{2011} and Pax_{2013} are Commission forecasts for total annual passengers at Dublin airport in 2011 and 2013 respectively, as set out in this Determination; I_{2011} is the average daily three-month interest rate between 1 November 2010 and 1 November 2011 using the Euribor rate or some other suitable measure, and I_{2012} is the average daily three-month interest rate between

1 November 2011 and 1 November 2012 using the Euribor rate or some other suitable measure.

w_{2011} is a correction per passenger to be made in the regulatory year 2013 on account of any difference for the year 2011 between the Commission's actual costs and expenses and budgeted costs and expenses that are recoverable through airport charges levied at Dublin airport. It is derived from the following formula:

$$w_{2011} = [WA_{2011} - WF_{2011} * (1+CPI_{2012}))] * (1+I_{2011}) * (1+I_{2012}) / Pax_{2013}$$

where WA_{2011} is the Commission's actual costs and expenses in 2011 that are recoverable from airport charges levied at Dublin airport, and WF_{2011} is the forecast Commission's budgeted costs and expenses for 2011 that are recoverable from airport charges levied at Dublin airport.

QS_{2013} represents a *Quality of Service* adjustment that takes a value between 0.955 and 1 depending on how many service quality targets the DAA manages to achieve. It equals 1 if the DAA achieves all the targets. If the DAA failed to meet any target, it would equal 0.955 and the level of permitted revenues would be 4.5% lower.

QS_{2013} = one minus the sum of

> 0.0005 * number of days in 2013 when passengers in a terminal that is open have to queue for more than thirty minutes to pass through passenger security, subject to this sum never exceeding 0.015 (1.5%); plus
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> 0.00025 * number of days in 2013 when access to the outbound element of the baggage handling system is denied to an airline or airlines for more than thirty consecutive minutes due to a single event system failure, subject to this sum never exceeding 0.0075 (0.75%); plus
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> 0.000625 * number of quarters in 2013 when the incoming element of the baggage handling system is available for less than 99% of operational hours, such that the value never exceeds 0.0025 (0.25%); plus
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> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.7 in the '*ease of way-finding through airport'* category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0025 (0.25%); plus
>
> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*flight information screens*' category of the ACI survey in the last two quarters of 2012 and first two

quarters of 2013, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.6 in the '*cleanliness of airport terminal*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.3 in the '*cleanliness of washrooms*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.0 in the '*comfort of waiting/gate area*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0025 (0.25%); plus

0.00025 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*courtesy/helpfulness of airport staff (excluding check-in & security)*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.001 (0.10%); plus

0.000375 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*courtesy/helpfulness of security staff*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0015 (0.15%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.5 in the '*all passengers' overall satisfaction with the airport*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.1 in the '*communications/ telecommunications/e-facilities*' category of the ACI survey in the last two quarters of 2012 and first two quarters of 2013, such that the value never exceeds 0.0025 (0.25%).

Regulatory period 1 January 2014 to 31 December 2014

The maximum permitted revenue per passenger for the regulatory period 1 January to 31 December 2014 shall be equal to:

$P_{2014} = [(€7.50 + T2_{2014} + Trigger_{2014}) * (1 + CPI_{2013}) + k_{2012} + w_{2012}] * QS_{2014}$

Where:

$T2_{2014}$ is an increase in the maximum permitted revenue per passenger allowed if T2 becomes operationally ready before end of 2012 or during 2013.

$T2_{2014}$ = €2.33 * (*Number of days in 2013 T2 operationally ready) / 365*

$Trigger_{2014}$ is an increase in the maximum permitted revenue per passenger arising should triggers for additional capital projects be met.

$Trigger_{2014}$ = the sum of

€0.89 if annual passenger numbers at Dublin airport in a 12-month period prior to the end of 2013 exceed 23.5 million (*the runway trigger*), or €0.00 otherwise; plus

€0.07 if there is a week in 2010, 2011, 2012 or 2013 when demand for aircraft stands is greater than 74 (*the apron development trigger*), or €0.00 otherwise; plus

€0.07 if legislation requires the DAA to upgrade its Dublin airport baggage security equipment prior to the end of 2014 (*the HBS trigger*), or €0.00 otherwise.

CPI_{2013} is the percentage change (whether of a positive or negative value) in the consumer price index between that published in October 2009 and October 2013.

k_{2012} is a correction per passenger to be made in the regulatory year 2014 on account of any under collection (capped at 5%) by the DAA in the regulatory year 2012. It is derived from the following formula:

$$k_{2012} = \text{minimum}[(P_{2012} - P_{2012,\ outturn}),(0.05 * P_{2012})] * (1+I_{2012}) * (1+I_{2013}) * (Pax_{2012} / Pax_{2014})$$

where $P_{2012,\ outturn}$ is the outturn revenue per passenger in 2012; Pax_{2012} and Pax_{2014} are Commission forecasts for total annual passengers at Dublin airport in 2012 and 2014 respectively, as set out in this Determination; I_{2012} is the average daily three-month interest rate between 1 November 2011 and 1 November 2012 using the Euribor rate or some other suitable measure, and I_{2013} is the average daily three-month interest rate between

1 November 2012 and 1 November 2013 using the Euribor rate or some other suitable measure.

w_{2012} is a correction per passenger to be made in the regulatory year 2014 on account of any difference for the year 2012 between the Commission's actual costs and expenses and budgeted costs and expenses that are recoverable through airport charges levied at Dublin airport. It is derived from the following formula:

$$w_{2012} = [WA_{2012} - WF_{2012} * (1+CPI_{2013}))] * (1+I_{2012}) * (1+I_{2013}) / Pax_{2014}$$

where WA_{2012} is the Commission's actual costs and expenses in 2012 that are recoverable from airport charges levied at Dublin airport, and WF_{2012} is the Commission's budgeted costs and expenses for 2012 that are recoverable from airport charges levied at Dublin airport.

QS_{2014} represents a *Quality of Service* adjustment that takes a value between 0.955 and 1 depending on how many service quality targets the DAA manages to achieve. It equals 1 if the DAA achieves all the targets. If the DAA failed to meet any target, it would equal 0.955 and the level of permitted revenues would be 4.5% lower.

QS_{2014} = one minus the sum of

> 0.0005 * number of days in 2014 when passengers in a terminal that is open have to queue for more than thirty minutes to pass through passenger security, subject to this sum never exceeding 0.015 (1.5%); plus
>
> 0.00025 * number of days in 2014 when access to the outbound element of the baggage handling system is denied to an airline or airlines for more than thirty consecutive minutes due to a single event system failure, subject to this sum never exceeding 0.0075 (0.75%); plus
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> 0.000625 * number of quarters in 2014 when the incoming element of the baggage handling system is available for less than 99% of operational hours, such that the value never exceeds 0.0025 (0.25%); plus
>
> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.7 in the '*ease of way-finding through airport'* category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%); plus
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> 0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*flight information screens*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.6 in the '*cleanliness of airport terminal*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.3 in the '*cleanliness of washrooms*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.0 in the '*comfort of waiting/gate area*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%); plus

0.00025 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the '*courtesy/helpfulness of airport staff (excluding check-in & security)*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.001 (0.10%); plus

0.000375 * number of quarters that Dublin airport does not receive a score of at least 3.8 in the 'c*ourtesy/helpfulness of security staff*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0015 (0.15%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.5 in the '*all passengers' overall satisfaction with the airport*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%); plus

0.000625 * number of quarters that Dublin airport does not receive a score of at least 3.1 in the '*communications/ telecommunications/e-facilities*' category of the ACI survey in the last two quarters of 2013 and first two quarters of 2014, such that the value never exceeds 0.0025 (0.25%).

Explanatory Memorandum

Purpose of the formulae

The Commission has structured the formulae and determined values of key terms in the formulae to effect the following policies:

- Provide a reasonable prospect for the DAA to make a reasonable rate of return on the regulatory value of assets employed in providing services at Dublin airport
- Reflect the levels of costs involved in operating Dublin airport that the Commission believes it is reasonable to assume, taking into account the scope for the DAA to be cost effective
- Specify the formulae for determining allowed revenues, thereby securing the economic incentives for the DAA to be cost effective
- Provide for an increase in revenue allowances that is conditional on the DAA completing work on a second terminal such that the facility is operationally ready
- Provide for increases in revenues allowances should certain milestones occur that warrant additional, substantial levels of capital expenditure by the DAA
- Provide for decreases in revenue allowances should the DAA fail to provide a suitable quality of service for users at Dublin airport
- Provide for the DAA to carry forward under-recovery of allowed revenues into subsequent regulatory periods provided the amount is relatively small
- Provide for the DAA to carry forward any over or under-recovery of allowed revenues in 2008 or 2009, to be consistent with the approach adopted in earlier regulatory years governed by the second Determination
- Provide for the automatic correction of allowed revenues for the effects of inflation or deflation

Forecast revenues arising from the formulae

The Commission has specified the terms of the formulae to provide a reasonable prospect for the DAA to make a reasonable rate of return on the regulatory value of the asset base employed in providing services at Dublin airport. It considers this prospect is secured if the discounted present value of revenues from airport charges, adopting the Commission's assumptions for passenger numbers at the airport, over the period of the determination equates to the present value of the Commission's assumptions for the relevant costs and revenues from sources other than airport charges during the period and the values of the regulatory asset base at the start and end of that period. This equation is set out in the yield table below, which is based on the scenario of none of the triggers occurring and T2 not becoming operationally ready.

	2010	2011	2012	2013	2014
RAB at start of the year (€m)	835.5	804.9	786.0	765.0	741.4
Net investment (€m)	37.8	37.8	37.8	37.8	37.8
Depreciation (€m)	(68.4)*	(56.7)	(58.8)	(61.4)	(63.1)
RAB at end of the year (€m)	804.9	786.0	765.0	741.4	716.2
Average RAB (€m)	820.2	795.5	775.5	753.2	728.8
Discounting rate of return	7.0%	7.0%	7.0%	7.0%	7.0%
Rate of return on average RAB	6.8%	6.8%	6.8%	6.8%	6.8%
Return on assets (€m)	55.5	53.8	52.4	50.9	49.3
Operating costs (€m)	173.0	175.1	177.3	179.9	183.1
Commercial revenues (€m)	(121.3)	(122.8)	(125.0)	(127.9)	(131.7)
Depreciation (€m)	68.4	56.7	58.8	61.4	63.1
Required revenues (€m)	175.5	162.8	163.6	164.3	163.7
Discounted Sum (€m) **695.7**					
Passengers (millions)	19.5	19.9	20.5	21.3	22.4
Per passenger revenue (€)	9.00*	8.11	7.90	7.70	7.50
Total revenues allowed (€m)	175.5	161.3	161.9	164.1	167.9
Discounted Sum (€m) **695.7**					
Adjustments per passenger					
Under recovery in 2008 (€)	0.03				
W-factor 2008 (€)	0.04				
2001 judicial review costs (€)	(0.14)				
Maximum revenue per passenger (€)	**8.93**	**8.11**	**7.90**	**7.70**	**7.50**

Table P1: Yield table

(*) In 2010, the Commission has included an additional €13.3m in depreciation (equal to the remaining value of Area 14 in the RAB) and added €0.68 to the per passenger revenues allowed in that year to help enable the DAA to operate the airport in a sustainable and financially viable manner.

Triggers

The Commission has included three triggers in the formulae that increase the maximum level of airport charges per passenger should events occur that require the DAA to undertake additional capital expenditure.

The runway trigger would entail an increase in the price cap should passenger numbers exceed 23.5 million in a 12-month period. The level of the increase is calculated to be sufficient to allow the DAA to spend €288m (in 2009 prices) building a new runway. The calculation assumes that the DAA recovers the costs in equal sums over 50 years and allows a real rate of return on the capital of 7% per annum.

The apron development trigger would entail an increase in the price cap should demand for aircraft stands at the airport exceed 74. The level of the increase is calculated to be sufficient to allow the DAA to spend €22m (in 2009 prices) developing the apron. The calculation assumes that the DAA recovers the costs in equal sums over 40 years and allows a real rate of return on the capital of 7% per annum.

The HBS trigger would entail an increase in the price cap should legislation require the DAA to upgrade its baggage security system prior to 2015. The level of the increase is calculated to be sufficient to allow the DAA to spend €10m (in 2009 prices) undertaking this work. The calculation assumes that the DAA recovers the costs in equal sums over 10 years and allows a real rate of return on the capital of 7% per annum.

The Commission has also included a trigger in the formulae that increases the maximum level of airport charges per passenger should the DAA achieve the milestone of making the second terminal operationally ready. The second terminal will be deemed operationally ready from the earlier of (a) the date at which the first passenger is processed through the second terminal or (b) the date at which any contract arising from the tender competition to operate the second terminal being organized by the Department of Transport requires the preferred candidate to commence operating in the second terminal.

The increase in the price cap from the date at which T2 is operationally ready reflects an allowance for both the capital costs associated with the project and an estimate of the net effect on operating costs at Dublin airport arising form the second terminal opening. To calculate the annual allowance for the forthcoming price cap, the Commission has assumed that the facility opens on 1 November 2010. On this basis, the Commission has estimated a reasonable allowance to cover operating costs and capital costs in the period up to end 2014. It has then identified the sum (€2.33) such that the per-passenger effect on charges is the same at all dates after T2 becomes operationally ready. The table below summarizes the calculations. Should the facility become operationally ready on some date other than 1 November 2010, the T2 trigger will still be with reference to the sum of €2.33 for the purposes of estimating the per passenger maximum level of airport charges in this Determination. Calculations relating to the regulatory asset base at the time of the next determination will be with reference to the actual date that T2 became operationally ready.

	2010	2011	2012	2013	2014
T2 capital costs (€m)	1.1	8.3	10.9	14.5	19.2
T2 operating costs* (€m)	25.0	30.2	30.6	30.5	30.3
Total costs (€m)	26.1	38.4	41.5	45.0	49.4
Discounted costs (€m) **167.1**					
Forecast passengers (millions)	19.5	19.9	20.5	21.3	22.4
Per pax revenue adjustment (€)	0.39**	2.33	2.33	2.33	2.33
Total revenues allowed (€m)	7.1	46.3	47.7	49.6	52.1
Discounted revenues (€m) **167.1**					

Table P2: Deriving the size of the T2 trigger

** These costs are net of associated savings in T1 from T2 opening, figures subject to rounding*

*** In 2010, the adjustment is pro-rated by 61/365 because the facility is assumed only to be operationally ready for 61 days in the year, from 1 November.*

Quality of service

The Commission has included in the formulae a quality of service term that decreases the maximum level of per passenger airport charges that the DAA may levy should it fail to achieve targets for various measures that the Commission has identified as measuring important aspects of service quality at the airport. The quality of service term will never reduce the allowed level of airport charges by more than 4.5% in a year (3.5% in 2010).

The size of the quality of service adjustment depends on which targets, if any, the DAA fails to achieve. They are not all assigned the same weight or measured in the same manner. These differences reflect judgments by the Commission about the appropriate weight to attach to the different measures.

Two of the measures entail deductions to the price cap according to the number of days that the DAA fails to meet a required target. The other ten measures relate to performances in each quarter. For nine of those measures, because of delays in the data becoming available the targets relate to the last two quarters of the preceding year and the first two quarters of the regulatory year.

The DAA will be responsible for arranging to have the necessary data collected for the service quality monitoring scheme. This includes participating in relevant surveys. If the DAA fails to provide necessary data for the scheme, it will be assumed to have failed to satisfy those targets for which necessary data are unavailable. Should the DAA advise that it is unable to collect the data in a suitable format, the Commission may waive the affected targets or substitute in an alternative means for measuring the target. Any such changes will be notified.

For the purposes of measuring time in a security queue, the queue start position will be defined as where the passenger joins the end of the queue (which may or may not be inside the security queue area). The queue end position is where the passenger hands over their boarding card to be checked at the entrance to the security screening area. The Commission accepts that passengers still have to spend time after that before they and their carry-on baggage are screened. Nevertheless, if there are delays with the screening, it will ultimately feedback and affect the time spent queuing to get to the point where boarding cards are checked. The proposed measure allows the data to be collected and/or audited by parties with access to the landside of the airport only.

The financial penalty associated with security queues exceeding 30 minutes will be waived in the event that the terminal is evacuated, there is industrial action by an airline or airline contractor that directly affects the security-search operation or an airline's check-in facility fails causing consequent delays in passenger processing through security.

For outbound baggage facilities, the DAA will be expected to measures any delays of more than 30 minutes affecting ground handlers at the check-in desks. The DAA will have failed to satisfy this metric if a baggage belt connecting to a check-in area is unavailable for more than 30 minutes *and* the DAA is unable to provide an affected airline or ground handler access to an alternative baggage belt within 30 minutes of the party notifying the DAA that it requires access to an alternative baggage belt.

To calculate the availability of the inbound-baggage belt, the DAA will be expected to measure the total number of hours for which all inbound-baggage belts are available, and divide this by the number of operational hours for the system (currently defined as 7.00am until midnight). The calculation is:

$$\frac{\text{Total operational hrs per qrtr} - \text{recorded downtime hrs of belts } \Sigma(A+B+...+Z)}{\text{Total operational hrs per qtr}}$$

The daily operational hours may change over time, and may differ between the two terminals (assuming T2 opens).

Exemptions to the monitoring systems for baggage handling will apply in the following circumstances:

- To allow planned and preventative maintenance where it does not impact on operations;
- If system replacement and upgrades or adjacent construction works require the closing down of a baggage belt or belts, where this is done in consultation with users and the time period is specified in advance (if work extends beyond this period, then the additional downtime *will* be included in the monitoring scheme);
- If any fault or misuse or abuse or malicious actions caused by third parties results in downtime;
- If any fault or stoppage occurs as a result of ground handler or airline resource issues within the baggage hall leading to chutes full and system dieback;
- If any fault or stoppage has been observed by an airline or airline contractor and not subsequently reported to the DAA or if any recorded downtime where a fault has been reported by an airline or their agents but, when the engineer attends the site, no fault is found and the equipment is working;

- If any fault or stoppage occurs as a result of any resource issue or industrial action by a ground handler or airline;
- In the event of fire-alarm activation, sprinkler activation, terminal evacuations, emergency-stop activations or maintenance to address pressing safety concerns;
- In the event of serious disruption caused by weather.

For the inbound-baggage system, an exemption will also apply if there are delays in passenger processing through immigration. For the outbound-baggage system, an exemption will also apply where any fault or stoppage results from insufficient airline check-in capacity leading to a baggage injection rate that exceeds the system's capabilities.

More generally, if the DAA fails to meet a target, the Commission will consider any evidence of extenuating circumstances that the DAA may provide.

Applying the formulae

To effect the Commission's policy of providing for changes in the maximum per passenger level of airport charges should T2 become operationally ready in 2010 or quality of service in any given year be unacceptable, the level of allowed revenues in a regulatory year may not be determined definitively until the end of the regulatory year.

The formulae include a correction term that allows the DAA to carry forward an under recovery from one regulatory period to the next. Unlike in past determinations, this carry forward is capped at 5%. Moreover, there is no provision to carry forward any over-recovery. To comply with the cap, the DAA will be required to effect a rebate to users within 45 days of the regulatory year ending should it over collect, i.e. no later than 14 February. The formulae do provide for the possibility of carrying forward any over or under recovery by the DAA in the last two regulatory years of the previous determination (2008 and 2009).

To assist in understanding how the formulae will work, the following tables set out examples dealing with the possibility that:

- T2 becomes operationally ready on 1 November 2010
- The runway trigger is activated, i.e. passenger numbers exceed 23.5 million
- The DAA fails to meet all the quality of service targets

The examples are for illustrative purposes.

Example one: no adjustments

	Assumptions
T2 operationally ready	Never
Inflation	0% all years
Passenger numbers	As per Commission forecast
Demand for stands	Less than 74 in all weeks
New security screening legislation	No
Quality of service at Dublin airport	All targets met
Any under-recovery of airport charges	No

Table P3: Assumptions for worked example one

		2010	2011	2012	2013	2014
(a)		8.93	8.11	7.90	7.70	7.50
(b)	$T2_t$	0	0	0	0	0
(c)	$Trigger_t$	0	0	0	0	0
(d)	= (a)+(b)+(c)	8.93	8.11	7.90	7.70	7.50
(e)	CPI_t	0	0	0	0	0
(f)	= (d) * (1+(e))	8.93	8.11	7.90	7.70	7.50
(g)	$k_{t-2} + w_{t-2}$	0	0	0	0	0
(h)	= (f) + (g)	8.93	8.11	7.90	7.70	7.50
(i)	QS_t	1	1	1	1	1
Maximum allowed revenues per passengers (P_t) [=(h)*(i)]		8.93	8.11	7.90	7.70	7.50

Table P4: Deriving the price cap in worked example one (€m)

Figures subject to rounding

Example two: T2 operationally ready on 1 November 2010

	Assumptions
T2 operationally ready	Ready on 1 November 2010
Inflation	0% all years
Passenger numbers	As per Commission forecast
Demand for stands	Less than 74 in all weeks
New security screening legislation	No
Quality of service at Dublin airport	All targets met
Any under-recovery of airport charges	No

Table P5: Assumptions for worked example two

		2010	2011	2012	2013	2014
(a)		8.93	8.11	7.90	7.70	7.50
(b)	$T2_t$	0.39	2.33	2.33	2.33	2.33
(c)	$Trigger_t$	0	0	0	0	0
(d)	= (a)+(b)+(c)	9.32	10.44	10.23	10.03	9.83
(e)	CPI_t	0	0	0	0	0
(f)	= (d) * (1+(e))	9.32	10.44	10.23	10.03	9.83
(g)	$k_{t-2} + w_{t-2}$	0	0	0	0	0
(h)	= (f) + (g)	9.32	10.44	10.23	10.03	9.83
(i)	QS_t	1	1	1	1	1
Maximum allowed revenues per passengers (P_t) [=(h)*(i)]		9.32	10.44	10.23	10.03	9.83

Table P6: Deriving the price cap in worked example two (€m)

$T2_t$ is 2.16 in years when it is operationally ready for the entire year; in 2010 the adjustment has to be pro-rated according to the number of days (61) in the year it is operationally ready

Example three: T2 operationally ready on 1 November 2010, two trigger events occur

	Assumptions
T2 operationally ready	Ready on 1 November 2010
Inflation	0% all years
Passenger numbers	As per Commission forecast
Demand for stands	82 in peak week in 2013
New security screening legislation	Requires new baggage screening equipment by end June 2011
Quality of service at Dublin airport	All targets met
Any under-recovery of airport charges	No

Table P7: Assumptions for worked example three

		2010	**2011**	**2012**	**2013**	**2014**
(a)		8.93	8.11	7.90	7.70	7.50
(b)	$T2_t$	0.39	2.33	2.33	2.33	2.33
(c)	$Trigger_t$	0	0.07	0.07	0.07	0.14
(d)	= (a)+(b)+(c)	9.32	10.51	10.30	10.10	9.97
(e)	CPI_t	0	0	0	0	0
(f)	= (d) * (1+(e))	9.32	10.51	10.30	10.10	9.97
(g)	$k_{t-2} + w_{t-2}$	0	0	0	0	0
(h)	= (f) + (g)	9.32	10.51	10.30	10.10	9.97
(i)	QS_t	1	1	1	1	1
Maximum allowed revenues per passengers (P_t) [=(h)*(i)]		9.32	10.51	10.30	10.10	9.97

Table P8: Deriving the price cap in worked example three (€m)

$Trigger_t$ is 0.07 from the year in which the new security screen equipment is required; it increases a further 0.07 the year after demand for stands exceeded 74 in the peak week

Example four: T2 operationally ready on 1 November 2010, two trigger events occur, DAA fails to meet certain service quality targets

	Assumptions
T2 operationally ready	Ready on 1 November 2010
Inflation	0% all years
Passenger numbers	As per Commission forecast
Demand for stands	82 in peak week in 2013
New security screening legislation	As in example 3
Quality of service at Dublin airport	All targets met except 3 days when security queues exceed 30 mins in 2010; and all four quarters in 2012 when ACI cleanliness of washrooms score is 2.8 and inbound baggage system only available for 91% of operational hours
Any under-recovery of airport charges	No

Table P9: Assumptions for worked example four

		2010	2011	2012	2013	2014
(a)		8.93	8.11	7.90	7.70	7.50
(b)	$T2_t$	0.39	2.33	2.33	2.33	2.33
(c)	$Trigger_t$	0	0.07	0.07	0.07	0.14
(d)	= (a)+(b)+(c)	9.32	10.51	10.30	10.10	9.97
(e)	CPI_t	0	0	0	0	0
(f)	= (d) * (1+(e))	9.32	10.51	10.30	10.10	9.97
(g)	$k_{t-2} + w_{t-2}$	0	0	0	0	0
(h)	= (f) + (g)	9.32	10.51	10.30	10.10	9.97
(i)	QS_t	0.9985	1	0.99625	0.99875	1
Maximum allowed revenues per passengers (P_t) [=(h)*(i)]		9.31	10.51	10.26	10.09	9.97

Table P10: Deriving the price cap in worked example four (€m)

*QS_{2010} is reduced by 3*0.0005 because of long security queues in 2010; QS_{2012} all four quarters of the inbound baggage system failings are taken into account (0.0025) but only the results from the first two quarters of the ACI cleanliness of washroom survey(0.00125); the third and fourth quarter 2012 ACI survey results affect QS_{2013} which is reduced by 0.00125*

Executive Summary

1. This report sets out the reasoning for the Commission's determination on the maximum level of airport charges that the Dublin Airport Authority (the DAA) may levy at Dublin airport. Airport charges include charges for taking-off, landing and parking aircraft, for the use of air bridges, for arriving and departing passengers, and for the transportation of cargo. The determination covers the five-year period from 1 January 2010 to 31 December 2014. The determination on the maximum level of airport charges is expressed as an annual per passenger price cap.

2. The price cap in 2010 will be €9.32 per passenger assuming that the second terminal (T2) opens on 1 November 2010.[1] If T2 does not open in 2010, the price cap will be €8.89 per passenger. In subsequent years, the price cap before any adjustments (including the opening of T2) will fall by 2.5% per annum in real terms. In years in which T2 is open, the annual per-passenger price cap will be about €2 higher than would otherwise be the case.

3. In the draft determination, the Commission identified two particular challenges peculiar to this third airport charges determination:

   - The effect of the economic downturn; and
   - The opening of T2.

4. Those two issues remained important considerations as the Commission finalised its determination. This is illustrated in the "waterfall chart" below which shows how various changes between the draft and final determination affected the overall level of the price cap in 2010. Two of the three biggest changes are directly attributable to the further reduction in passenger forecasts and the net additional costs associated with opening a second terminal. These two factors also motivate the third big change, an adjustment accelerating depreciation charges in 2010.

[1] Unless otherwise stated, all costs and prices in this report are in 2009 prices. The Commission has applied an inflation rate of 4.0%, 4.9%, 4.1% and -6.6% for the years 2006, 2007, 2008, and 2009 (October 2008–October 2009) respectively. These numbers were estimated using the Central Statistics Office consumer price index.

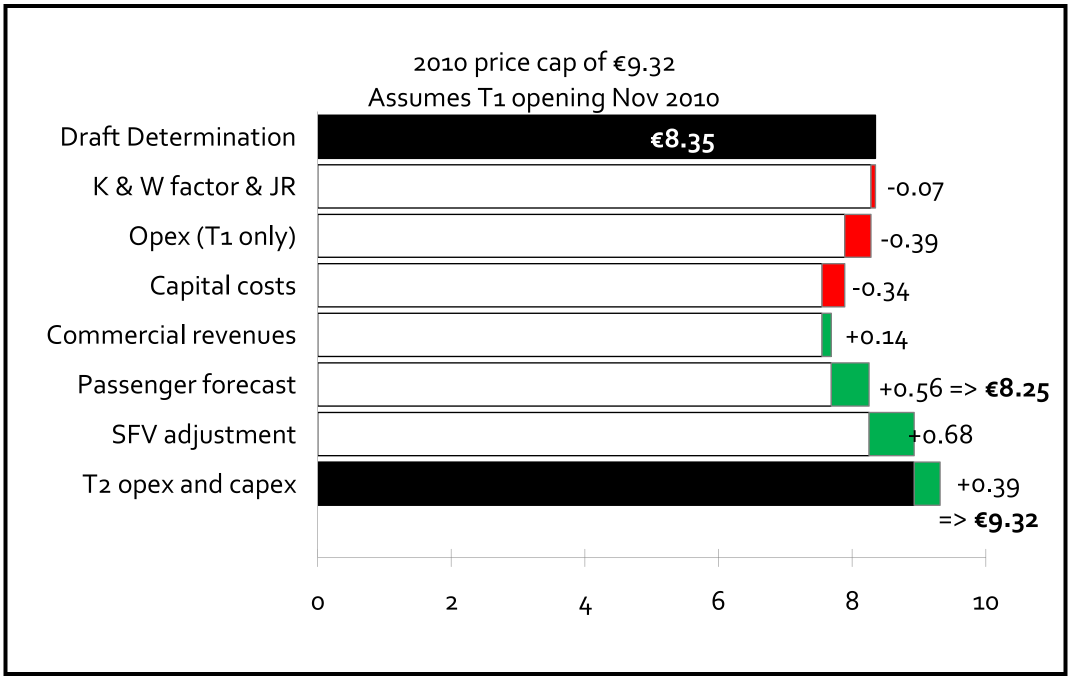

Figure 1: 2010 Price cap *versus* draft determination proposals

5. While there have been more positive signals about the state of the global economy, the evidence concerning demand at Dublin airport has suggested that the passenger forecasts used in the draft determination were too optimistic. The calculations that the Commission uses to make a determination means that a lower passenger forecast results in a higher price cap, all else equal. This is because airports typically exhibit economies of scale, i.e. average costs per unit fall as the scale of the operation (the number of passengers) increases. To some parties the outcome – a higher price cap in response to lower demand – seems perverse. While such criticisms are easy to understand, limits on the ability of the airport to cut fixed costs (most notably, to undo past investments) mean that these need to be recovered from a smaller number of passengers.

6. The final determination has explicitly set out how much the opening of T2 will affect the cap on airport charges. This contrasts with the draft determination, which proposed at that time to rely on the outcome of the tender process being organised by the Department of Transport and to pass through the costs of the winning bidder (with a further operating costs allowance for any services not included in the tender but instead undertaken by the DAA and an adjustment for any cost savings in the existing terminal). The Commission concluded that it would have to change its earlier approach since the tender would not be complete by the time the final determination was made; it was possible that confidentiality agreements would prevent the Commission from using the amount of any winning bid to calculate an adjustment to the price cap; and there still remained some uncertainty about precisely what services the contractor would provide. Moreover, some users expressed concerns that the Commission would be failing to protect their interests if it took the price

from the tender process when setting a price cap. Despite representations from some parties arguing that T2 should be mothballed, the Commission concluded that it should estimate the cost implications assuming a 60/40 split of passengers between the two terminals. The Commission notes that subsequent to its own considerations of the treatment of T2, it also received a Ministerial Direction in relation to the early development of T2. If T2 opens in 2010, the Commission expects the DAA to incur a sizeable level of set-up costs. The Commission has capitalised these costs for the purposes of calculating the price cap.

7. The T2 set-up costs and the continued fall in demand mean that the Commission forecasts weaker financial ratios in 2010 than was the case at the draft determination. The falling demand has adversely affected the financial well-being of many companies in the aviation sector, including the DAA. The timing is especially unfortunate for the DAA, as it coincides with completion of a major investment project building a second terminal. The Commission has had to consider carefully whether and how to address this.

8. The position is sufficiently weak that the Commission has concluded that it should accelerate some depreciation charges and increases the level of airport charges that the DAA can collect in 2010. This is a one-off adjustment that does not apply in later years of the determination. In net present value terms, the DAA does not gain from the change. The adjustment does not restore the DAA's financial ratios to levels in 2010 consistent with investment grade. The Commission does not believe that demand at Dublin airport is very price sensitive, but an increase in airport charges of this scale is nevertheless likely to cause demand to fall significantly. The figure below shows what the per-passenger level of charges would have to be using both the Commission's assumptions and those provided by the DAA earlier in the year. Such levels would also be incompatible with the Commission's other statutory objectives, particularly protecting the interests of current and prospective users. The Commission addresses this responsibility to users by limiting how much extra users are asked to pay prior to T2 even opening.

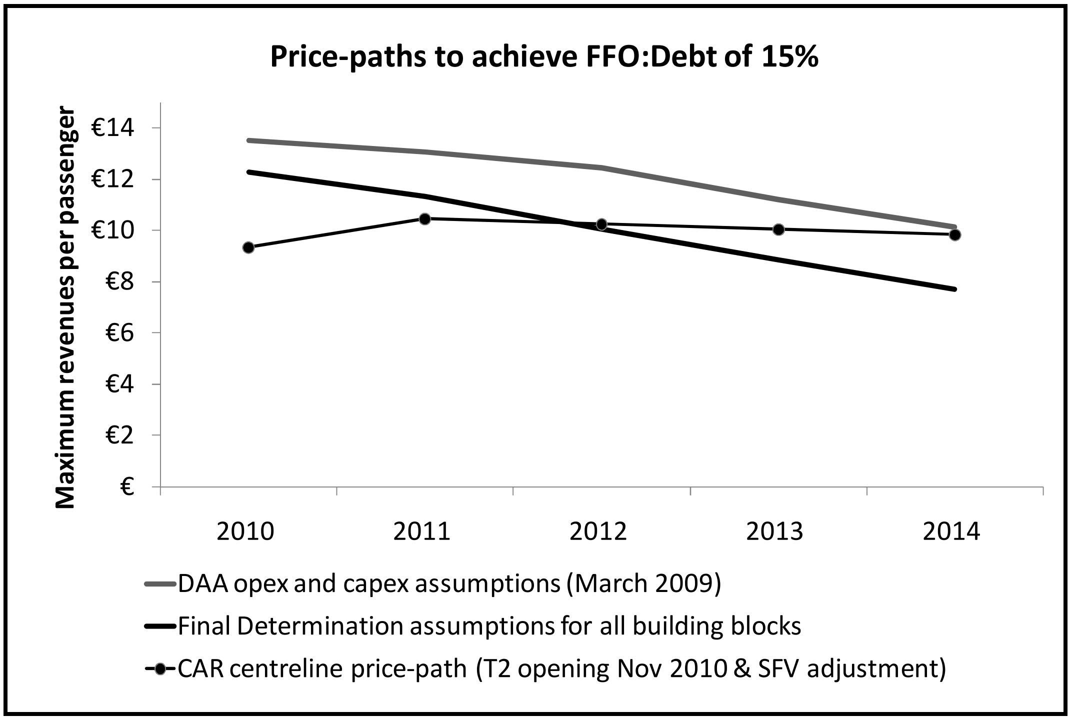

Figure 2: Price-path for FFO:debt at 15% in each year 2010-14

9. For later years of the Determination, the Commission has concluded that no further adjustments are justified to enable the DAA to operate in a sustainable and financially viable manner. It has looked at the DAA's medium to long-term prospects, an approach that it considers consistent with how the investment community assesses a company's prospects. Given recent economic events, many companies are in a weaker financial position than they expected. Investors are likely to take most comfort from companies that demonstrate they are tackling problems – seeking to realise cost-saving plans on the operating side and deferring non-essential investments – and for whom there are reasonable prospects for revenues to recover in the longer term. The level of airport charges at Dublin airport will be higher than they have been in the recent past once T2 opens; the Commission is satisfied that it has played its part in enabling the DAA to operate the airport in a sustainable and financially viable manner whilst also complying with its other statutory objectives.

10. For existing facilities, the Commission has assumed that there is scope for the DAA to realise efficiency savings corresponding to about 4% of 2008 operating costs. It has used the DAA's 2008 per-FTE payroll costs and assumed no increase in real wages between now and 2014. For T2 FTEs, the real wages are with reference to benchmark data from the general economy rather than existing contracts at Dublin airport. Given more recent data on staffing levels, the Commission has concluded that there is no case for assuming any phasing in to achieve the level of efficient operating costs that the Commission has identified (taking into account the efficiency savings on current practices identified, the effect of changing demand on workforce needs, and the effect of T2 opening). In real terms, the changes in operating costs assumed in 2010 are modest relative to

2008 levels; the required savings are greater if expressed in nominal terms since there has been deflation in the past year.

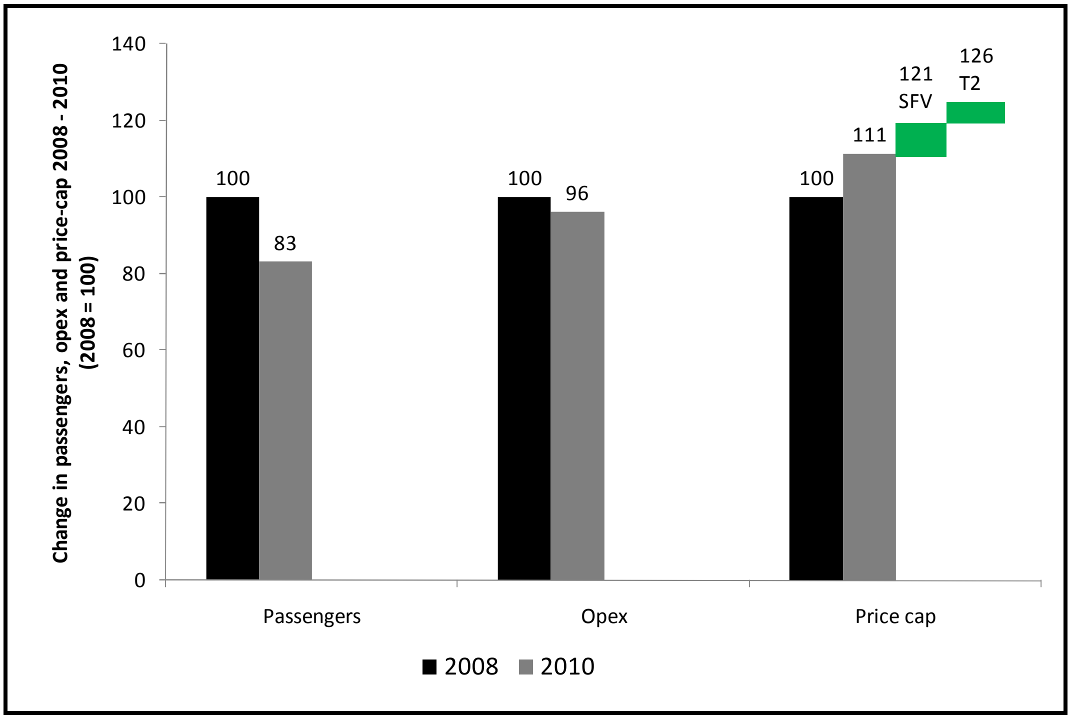

Figure 3: Changes in passengers, operating costs and the price cap

11.For commercial revenues the Commission has assumed that the DAA will earn €6.08 per passenger on average. This corresponds to total revenues of €629 million (€629m) over the period, lower than the forecast in the draft determination largely because of the more gloomy forecasts for passenger numbers at Dublin airport.

12.The opening regulatory asset base (RAB) is €836m. The Commission will allow an extra €635m into the RAB when T2 is operationally ready (currently assumed to be 1 November 2010). The principles for rolling forward the RAB have been updated since the draft determination, having considered the representations made. For sums allowed into the RAB the Commission has calculated a return on capital of 7%. This is its estimate of the real, pre-tax cost of capital.

13.The Commission has made a determination assuming total investment at Dublin airport of €189m. A further €321m has been allowed conditional on certain triggers being met. Most of this conditional allowance relates to the costs of building a new runway, which the Commission will allow if demand in any 12-month period exceeds 23.5 million passengers per annum (mppa). The Commission's runway allowance is sufficient to build a runway of 3.1km length, which the Commission believes will allow direct access with key markets in developing economies, including the Far East, as required in the Ministerial Direction.

14.The determination makes a direct link between the quality of service users receive at Dublin airport and the level of the price cap. The annual price cap may be up to 4.5% (3.5% in 2010) lower than would otherwise be the case if the DAA consistently failed to meet the quality of service targets set. The targets relate to 12 different aspects of service quality, detailed in the table below. The main changes since the draft determination are the focus on penalising lengthy delays in passenger processing and access to outbound baggage handling systems, and the inclusion of security staff when measuring the courtesy and helpfulness of security staff.

Service quality measure	Source	Target	% weight in price cap
Security passenger search time no longer than 30 minutes	DAA	100%	1.50
Percentage of time out-bound baggage handling system unavailable for more than 30 minutes during hours of operation	DAA	0%	0.75
Percentage of time in-bound baggage handling system available during hours of operation	DAA	99%	0.25
Ease of way-finding	ACI	3.7	0.25
Flight information screens	ACI	3.8	0.25
Cleanliness of airport terminal	ACI	3.6	0.25
Cleanliness of washrooms	ACI	3.3	0.25
Comfortable waiting/gate area	ACI	3.0	0.25
Courtesy/helpfulness of airport staff (excluding check-in & security)	ACI	3.8	0.10
Courtesy/helpfulness of security staff	ACI	3.8	0.15
Overall satisfaction (all passengers)	ACI	3.5	0.25
Communication/telecom/e-facilities	ACI	3.1	0.25

Table 1: Quality of service regime

15. In making this Determination the Commission is satisfied that it has complied with the Ministerial Direction in the context of meeting its three statutory objectives. It has protected the reasonable interests of current and prospective users, facilitated the efficient and economic development of Dublin airport to meet the requirements of these users, and enabled the DAA to operate and develop the airport in a sustainable and financially viable manner. Arriving at a determination that satisfies these three objectives, given their potentially conflicting implications, has of necessity required making certain judgment calls.

16. There were 22 representations received in respect of the draft determination. Redacted copies of those representations are available on the Commission's website. The Commission carefully considered all of the representations. The rest of this report includes material describing how the Commission has addressed those representations in making this final determination.

1. Introduction

1.1 This paper presents the Commission's Determination setting the maximum level of airport charges that the Dublin Airport Authority (the DAA) may levy at Dublin airport. Airport charges include charges for taking-off, landing and parking aircraft, for the use of air bridges, for arriving and departing passengers, and for the transportation of cargo. The Determination covers the five-year period from 1 January 2010 to 31 December 2014. It is expressed as an annual per passenger price cap.

1.2 To arrive at this Determination, the Commission has published a number of consultation papers, spoken with a variety of interested parties, engaged consultants, and analysed data and information drawn from many different sources.

1.3 The Commission published its proposed timetable for the process leading to this Determination in its Annual Report to the Minister for Transport for the year ended December 2007. An up-to-date timetable was maintained on the Commission's website, with an email sent to interested parties alerting them to any changes to this timetable.

1.4 Consistent with earlier determinations, the Commission's timetable leading to this Determination included the publication of both an issues paper and later a draft determination. Parties were invited to comment following the publication of both documents.

1.5 In advance of the issues paper, the Commission published consultation papers on how quality of service might be treated for the purposes of making a determination and on the possibility of enhancing the DAA's incentives to be efficient by means of a "rolling incentive scheme". At the time of the 2005 determination, the Commission committed to undertake work on both of these topics prior to the next (this) Determination. The comments received from parties to these two consultation papers were discussed in the issues paper, and ideas subsequently developed and refined in time for this Determination.

1.6 In October 2008, the Commission published the issues paper. The paper set out its purpose:

> *"to consult with all parties on how the Commission should proceed to determine the next price cap. There are a wide range of issues that can potentially influence the final determination. The Commission is keen to hear from all parties on these matters at an early stage. Comments on policies that the Commission should adopt, methodologies that the Commission should or should not use, and possible data sources that the Commission might rely on are all welcome."*[2]

The paper included historic data about the DAA's performance to date, and compared these out-turns with the forecasts made at the time of the 2005 determination. Parties were allowed almost eight weeks to prepare responses. Eight parties responded by that deadline. A further three

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[2] Page 1, Issues Paper, Commission Paper CP6/2008.

submissions, from the Dublin Airport Consultation Committee (DACC), Forfás and the National Consumer Agency, were received in January 2009. The Commission offered to meet with all parties that made a submission. Three parties – the Car Rental Council of Ireland, the DAA, and the Irish Association of International Express Carriers – accepted the offer and met with the Commission. The Commission also chaired a series of meetings open to all interested parties to discuss investment needs at Dublin airport.

1.7 A draft determination was published in June 2009. Parties wishing to respond had a statutory consultation period of seven weeks. Twenty-two parties, listed in Annex A, responded by the deadline. Following a request from Ryanair, respondents were afforded a further two-week period to comment on the responses to the draft determination of other parties. Four parties – Aer Lingus, the DAA, DACC, and Ryanair – provided such comments. The Commission also arranged individual meetings with the DAA, DACC, and Ryanair to discuss their responses following requests from these parties for such meetings.

1.8 The Commission has carefully considered the various representations made prior to making its Determination. It has sought additional information from some parties, such as requesting details on any models used by the DAA, DACC, the Portmarnock Residents Association (UPROAR) and Ryanair to generate passenger forecasts for Dublin airport. The Commission has also arranged or sought to arrange meetings or conference calls to discuss specific topics with parties on a variety of issues, including quality of service and financeability. Such discussions have not been confined to meeting with respondents to the draft determination; the Commission also sought to meet with other parties where they might have a particular expertise or insight that the Commission was keen to understand better.

1.9 A number of studies conducted by consultants employed by the Commission have helped inform this Determination. Reports by Indecon and Jacobs Consultancy and by Booz and Co looking respectively at the current operating efficiency of the DAA and the proposed costs of its capital investment program were published at the time of the draft determination. Following receipt of comments to the draft determination, the Commission sought and received answers from these consultants to a number of queries arising from their work. Separately, the Commission tendered for work to assess the likely implications for operating costs associated with the completion of the project to build T2. The Commission concluded that it should change from the approach it proposed in the draft determination for treating T2 operating costs, a change partly in response to representations made to the draft determination. The change in approach required consulting support which Booz and Co provided. Booz met with a number of parties during their study. A draft of their report was published by the Commission in November and parties were given two weeks to comment on the findings.

1.10 Information relied on by the Commission to help make this Determination includes information already in the public domain, as well as information provided by the DAA or other interested parties. In some cases, parties provided the Commission with information that it had not sought; in other instances, the Commission made a request for such information. When possible, the Commission has placed such information in the public domain. More generally, the Commission has sought to satisfy itself that information provided to it is consistent with other available information. For example, the Commission has checked that more disaggregated data provided by the DAA are consistent with the regulatory accounts that the DAA prepares. The regulatory accounts themselves are not, in the Commission's view, especially helpful for the purposes of making a determination governing the period 2010-2014. The Commission has sought more detailed information from the DAA than is available from the regulatory accounts. Moreover, the regulatory accounts are backward looking, whereas the Determination sets a price cap for future periods and so the Commission needs to form a view on how costs and revenues at the airport are likely to evolve. For these reasons, the Commission has not sought to undertake the kind of analysis of the DAA's regulatory accounts that Ryanair argued was necessary in its response to the draft determination. Extracts from the DAA's 2007 and 2008 regulatory accounts have been published.

Structure of the report

1.11 The next chapter discusses the Ministerial direction that the Commission received after the draft determination on 29 October 2009, and how the Commission has complied with this direction. Thereafter, the remainder of this report follows a similar structure to both the issues paper and the draft determination.

1.12 *Chapter three* describes the Commission's approach to regulation.

1.13 *Chapter four* sets out how the Determination has regard to service levels at the airport.

1.14 *Chapters five, six, seven* and *eight* respectively deal with the traditional regulatory building blocks of passenger forecasts, operating expenditure ("opex"), commercial revenues and capital costs.

1.15 *Chapter nine* discusses how the Determination will affect the DAA's financial viability.

1.16 *Chapter ten* deals with miscellaneous issues not discussed in the other chapter but nevertheless of interest for the purposes of making this Determination.

1.17 *Chapter eleven* sets out how the Commission has made a determination that follows the three statutory objectives, and had due regard to nine statutory factors.

1.18 There are five annexes. These list the parties that made representations to the draft determination; show econometric results for models used to help forecast commercial revenues; set out principles for rolling forward the RAB; discuss a so-called 'debt-inflation shield'; and provide a summary on the post 2009 allowances for new investments.

1.19 The report assumes that the reader is familiar with the contents of the issues paper and draft determination. Consequently, not all of the material in those documents is repeated here. This document also does not provide a line-by-line commentary on all the representations that the Commission has received. To see all the representations made to the Commission by interested parties, readers are referred to the Commission's website. The Commission has considered all these representations carefully. Each chapter of this report includes a discussion of points raised by different parties in their representations and explains why the Commission has accepted or rejected such representations.

2. Ministerial Direction

2.1 On 29 October 2009 the Commission received a letter from the Minister for Transport dated 27 October 2009 containing a direction (the "2009 Direction") under Section 10 of the 2001 Act.[3] Under this section the Minister is empowered to give "…such general policy directions as he considers appropriate to be followed by the Commission in the exercise of its functions…" The 2009 Direction relates to the Commission's function to set a maximum level on airport charges that the DAA may levy at Dublin airport.

2.2 In his letter, the Minister clarified Government policies on certain aspects relating to Dublin airport. He alluded to the serious challenges facing the aviation industry at present, which have to be balanced in the Minister's view with the long-term needs of the sector and future economic development. The Minister referred to past decisions by the Government to approve investment in new capacity at Dublin airport, guided by the airport's central role as the international gateway airport for the country. The Minister noted the Commission's compliance with Ministerial directions in 2005 and 2007 to allow the DAA to add capacity in an efficient and timely manner and to be able to fund the allowed investment programme.

2.3 Two Government documents were referred to in the letter: *Building Ireland's Smart Economy. A Framework for Sustainable Economic Renewal,* and the Department of Transport's *Statement of Strategy* for 2008-2010. The former was published in December 2008 and the latter in April 2008. From the former, the Minister referred to the key action under Action 4, a commitment to invest some €2 billion in Dublin Airport, as well as noting the importance the framework attached to improving trade, investment and tourism links with new and fast developing markets and diversifying the sources of foreign investment. As regards the *Statement of Strategy*, the Minister referred to Ireland's aviation strategy as promoting regular, safe, cost effective and competitive air services linking the country with key business and tourism markets.

2.4 The Minister also referred the Commission in his letter to the Aviation (Preclearance) Act 2009. He noted that this Act was designed to strengthen the attractiveness of Irish airports for international travel and that the proposed pre-clearance facility in Dublin airport will be located in Terminal 2 (T2).

2.5 The Minister also stated that it was appropriate "to clarify policy" as regards the "financially sustainable development of Dublin airport". In that regard, the Commission was directed to:

> *"ensure that the Dublin Airport Authority's financial viability is protected in order to implement government policy on:*
>
> a) *the role of Dublin Airport as an international gateway for Ireland and its key strategic role in relation to air access, inward investment and general economic development;*

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[3] A full copy of the letter and the Direction is available on the Commission's website, www.aviationreg.ie

b) *The desirability that Dublin Airport should have the terminal and runway facilities to promote direct international air links to key world markets, such as new and fast-developing markets in the Far East and the importance of ongoing and planned infrastructure development in this context;*

c) *the development of Terminal 2 as quickly as possible as set out in the Government decision of May 2005;*

d) *the operation of Dublin Airport Authority on a commercial basis without recourse to Exchequer funding or an equity injection by the State and in that context the need to secure lender confidence and raise debt financing on a cost efficient basis"*

2.6 The Commission received the 2009 Direction after it published its draft determination. It has carefully considered how it might best fulfil its statutory objectives, having regard to representations received from parties, while still complying with the requirements of the Direction. It has considered what, if any, changes might have to be made to the proposals set out in the draft determination. With this approach in mind, the Commission has addressed the particular requirements contained in points (a), (b), (c), and (d), and examined the extent to which its proposals set out in the draft determination require amending as a result.

2.7 Since it was established, the Commission has advocated and implemented the economic concepts of productive, allocative, dynamic efficiency in regulating Dublin airport, a view supported by the Competition Authority. In CP9/2004 the Commission confirmed its view that these concepts continued to promote the amended statutory objectives inserted by the State Airports Act 2004. The Commission equated dynamic efficiency with the objective of enabling an efficient operator to develop Dublin airport in a sustainable and financially viable manner.

2.8 In making a determination, one of the Commission's objectives is "…to *enable* Dublin Airport Authority to operate Dublin airport in a sustainable and financially viable manner" [Commission's emphasis]. The responsibility to *ensure* the DAA operates and develops Dublin airport in a sustainable and financially viable manner rests with the DAA.[4]

2.9 Mindful of the Commission's obligations under the 2001 Act and having carefully considered the 2009 Direction, the Commission is satisfied that it has complied with the 2009 Direction in making this Determination. The four specific government policies are addressed in turn below.

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[4] Section 9(4)(a) of the State Airports Act 2004 imposes the general duty on the DAA to conduct its affairs so as to ensure the revenues of the company are not less than sufficient taking one year with another to -

i. Meet all charges which are properly chargeable to its revenue account
ii. Generate a reasonable proportion of the capital it requires, and
iii. Remunerate its capital and pay interest and repay its borrowings.

(a) the role of Dublin Airport as an international gateway for Ireland and its key strategic role in relation to air access, inward investment and general economic development;

2.10 The Commission believes that it is crucial that the airport offers users a suitable quality of service at a cost-effective price such that it will encourage and incentivise greater air access, greater investment and thereby contribute to the broader economic development of the State. The Determination includes a quality of service regime, developed by the Commission following consultation with all interested stakeholders, including stakeholders such as the IDA that are tasked with promoting inward investment. The Commission also hosted a series of meetings open to all stakeholders to discuss investment needs at the airport. Parties attending those meetings were invited to submit comments setting out their thoughts on the desirability of the investment plans. The Determination allows a price cap sufficient to enable the DAA, provided it is efficient, to fund what the Commission considers to be an appropriate level of investment to provide users with a suitable quality of service into the future and to cover the operating costs necessary to provide such a quality of service today. The Commission is also mindful that general economic development would be hindered if access to Dublin airport was restricted because of capacity constraints. The Determination addresses this, most specifically through its treatment of possible costs associated with adding new runway and terminal capacity, items that were separately identified in the 2009 Direction.

(b) The desirability that Dublin Airport should have the terminal and runway facilities to promote direct international air links to key world markets, such as new and fast-developing markets in the Far East and the importance of ongoing and planned infrastructure development in this context

2.11 In the 2007 interim review the Commission made allowance for the DAA to recover the investment costs associated with building a second terminal. This Determination allows the DAA to recover some of those investment costs, as well as operating costs associated with operating T2. The Commission is satisfied that its Determination complies with a requirement to enable the DAA to protect its financial viability while implementing government policy requiring Dublin airport to have terminal facilities suitable for offering international air links to key world markets.

2.12 Regarding suitable runway facilities, the Commission has made an allowance for the DAA to recover a sum sufficient to cover the costs associated with building a runway of length 3.1km, if and when annual passenger numbers exceed 23.5 million. This ‘trigger’ is included since the airport already has sufficient runway capacity to handle existing levels of demand; even with the lag between commencing and completing work on a new runway, the Commission believes that Dublin airport will continue to be able to provide runway facilities that permit direct international air links to key international markets. The allowance in this Determination is sufficient only to fund a 3.1km runway, rather than the longer 3.7km runway that the DAA proposed. The Commission judges that a 3.1km facility is sufficient to facilitate the efficient and economic development of the airport for prospective users but the funding of a longer runway would not meet the reasonable requirements of current and prospective users as voiced by them. It would therefore be contrary to the Commission's obligation to protect their interests if it allowed the DAA to recover such costs from the generality of users.

Runway*	City	Distance to Dublin (000km)**
Existing runway (2.637km):		
Range 6,700-10,000km	Beirut	3.9
A330s, B747, B777	Jerusalem	4.1
Max payload, ltd fuel	Amman	4.2
	Riyadh	5.4
	Dubai	5.9
	Muscat	6.3
	New Delhi	7.1
	Beijing	8.3
	Los Angeles	8.3
	Mexico City	8.5
	Seoul	9.0
	Sao Paulo	9.4
	Pretoria	9.4
	Tokyo	9.6
	Guangzhou	9.7
	Hong Kong	9.8
	Bangkok	9.9
Runway option in draft determination (3.110km)		
Range 7,250-12,750km	Kuala Lumpur	10.9
A330s, B747, B777	Manila	11.0
Max payload, ltd fuel	Buenos Aires	11.0
	Singapore	11.2
	Santiago	11.4
	Brunei	11.6
	Jakarta	12.1
DAA's preferred option (3.660km)		
Range 7,900-13,800km	East Timor	13.4
A330s, B747, B777		
Max payload & MTOW		
Beyond range of any of the runway options		
	Sydney	17.2

Table 2.1: Runway specifications and destinations served

*Source: * DAA slide 10, CIP 2010-2014 Airside Projects, CAR consultation meeting #4, 6 May 2010; ** www.travelmath.com*

2.13 The 2009 Direction does not specify which markets in the Far East it is desirable for Dublin airport to have direct links with. The DAA has provided maps illustrating the airports served by runways of 2.6km and 3.7km respectively. The DAA also provided the ranges that could be served by runways of 2.6km, 3.1km, and 3.7km. The table above shows these ranges, and lists the distance between Dublin airport and a number of cities, including places where Enterprise Ireland has overseas offices or provides services for clients from other locations.[5]

2.14 These results suggest that a 3.1km runway allows direct air links with almost all the same markets as a 3.7km runway. On this basis, the Commission is satisfied that an allowance for a 3.1km runway enables the DAA to promote direct international air links with key world markets. The Commission accepts that some airlines may conclude that a direct air link is uneconomical from their perspective using a 3.1km runway because of restrictions on maximum take-off weight (MTOW). The draft determination indicated that the Commission would consider structuring future determinations so as to allow the DAA to fund a longer runway if it could propose a charging mechanism that protected the generality of users from paying for such a facility. That remains the case. In this way, the Commission has made a Determination that enables the DAA to promote further the possibility of direct air links with Dublin airport.

2.15 The Commission is also conscious that asking all airlines to pay higher airport charges to fund a longer runway may make other routes uneconomical. It has therefore concluded that the allowance provided to the DAA to fund a 3.1km runway complies with the direction by enabling runway facilities sufficient to promote links to markets in the Far East.

(c) the development of Terminal 2 as quickly as possible as set out in the Government decision of May 2005;

2.16 The 2007 interim review indicated that the Commission would apply a trigger, such that after 2009 subsequent determinations would only allow the DAA to recover costs associated with T2 once the facility was operationally ready. This was designed to provide the DAA with incentives to build the facility within the timescale set out in the 2005 Aviation Action Plan. The Determination implements such a trigger for T2, which was originally intended to be open by end 2009 but is currently not ready. The Commission believes that applying this mechanism provides incentives for the DAA to develop T2 as quickly as possible, thereby complying with the 2009 Direction to enable the DAA to protect its financial viability and open T2 as quickly as possible.

2.17 Since the draft determination, the Commission has assessed the implications for operating costs if T2 opens. The calculations used in this Determination to decide on the size of the T2 trigger include an allowance for these (net) operating costs. This includes operating costs that will arise in the first year setting up the facility.

[5] See www.enterprise-ireland.com/exports/country+profiles.

(d) the operation of Dublin Airport Authority on a commercial basis without recourse to Exchequer funding or an equity injection by the State and in that context the need to secure lender confidence and raise debt financing on a cost efficient basis

2.18 Complying with the 2009 Direction in relation to this item raises a number of issues. In 2007, the Commission considered a similarly worded direction and concluded that it would have to consider in detail the DAA's ability to finance additional capacity without recourse to Exchequer funding or an equity injection by the State. It did this by analysing how a number of factors, including airport charges, passenger forecasts, and opex would affect the DAA's funds from operations to debt (FFO:debt) ratio, a ratio used by credit-rating agencies. The Commission at the time satisfied itself that its determination would allow the DAA to finance increased capacity without recourse to Exchequer funds. In the same determination, the Commission also sought to protect the interests of current and prospective users by a number of means including back-loading of deprecation charges (on the basis that most of the benefits from the new capacity would accrue in later periods when demand was projected to be higher) and by putting the DAA at risk of never recovering some of the costs of the project (since the Commission concluded that the DAA was proposing to add considerably more capacity than necessary to meet the reasonable interests of current and prospective users).

2.19 In this Determination, the Commission has also looked at the DAA's FFO:debt ratio. It has concluded that the Determination satisfies the Commission's three statutory objectives, having regard to the need to strike a balance between enabling the DAA to operate in a sustainable and financially viable manner and protecting the interests of current and prospective users. The Commission considers that the analysis it has undertaken looking at the DAA's financial viability remains appropriate for striking a balance between protecting the interests of current and prospective users and enabling the DAA to operate the airport in a sustainable and financially viable manner.

2.20 The Commission has been mindful that the need for the DAA to secure lender confidence and raise debt finance on a cost efficient basis has to be considered in conjunction with the Commission's statutory objectives. Given the relatively modest level of investment that the Commission thinks is required at Dublin airport, the DAA should be able to develop Dublin airport in an efficient and economic manner to meet the reasonable requirement of users without raising additional debt or securing an equity injection. This depends on the extent to which the DAA intends to pay dividends to its shareholder or invest outside Dublin airport and/or make investments at Dublin airport that the Commission does not consider meet the reasonable requirements of current and prospective users. To adjust the price cap in response to such scenarios would arguably leave the Commission in breach of its statutory objectives to protect the interests of current and prospective users.

2.21 Equity injections are arguably more likely during periods when a company is undertaking major investment programmes, as is the case for the DAA. Most commercial companies cannot and do not increase prices to avoid the need to inject or raise new equity. Moreover, to raise debt financing on a cost effective basis, evidence that the equity investors are willing to commit additional capital may provide lenders with greater confidence about the company's prospects and lead to a lower cost of debt. As described in chapter nine, there is a considerable impact on the DAA's finances due to the costs of the 2006-2009 investment programme combined with the current economic downturn, even after the price increases provided for in this Determination. In many cases, a regulator would assume any financeability problems for a company occurring part way through the next five years would be dealt with by new capital formation. Government policy that the DAA would operate without recourse to Exchequer funding or an equity injection, notified to the Commission in the 2009 Direction, means it is not open to the Commission to make this assumption.

2.22 The Commission has satisfied itself that its Determination enables the DAA to operate the airport in a sustainable and financially viable manner. The Commission has also retained measures designed to protect the interests of current and prospective users. In seeking to balance these potentially competing statutory obligations, the Commission believes that its Determination complies with the 2009 Direction as it relates to all four Government policies to the extent that this is possible while also seeking to comply with the statutory objectives.

3. The Commission's Approach to Regulation

3.1 The Commission has expressed the cap on airport charges as an annual maximum per passenger charge that the DAA may levy on airport users. This is consistent with previous determinations and with the proposal in the draft determination. The per-passenger cap on airport charges is based on a forecast of aeronautical costs and also expected net commercial revenues. This is sometimes referred to as a 'single-till' approach. An alternative approach, known as 'dual till', bases airport charges on the assets and costs involved in providing the services defined as airport charges and does not consider the costs and revenues derived from other activities.

3.2 The annual price caps have been derived from a series of inputs known as 'regulatory building blocks'. These building blocks are:

- An estimate of efficient future opex;
- Plus a return on capital;
- Plus a depreciation allowance;
- Less an estimate of future commercial revenues.

3.3 The Determination sets annual price caps sufficient to allow the DAA to recover the sum of these building blocks. This calculation requires the Commission to make a forecast of annual passenger numbers at Dublin airport. Each year's annual price cap is approximately equal to the sum of that year's building blocks divided by a forecast of annual passenger numbers. Chapters five to nine of this report explain how each the Commission has arrived at an estimate for each of these building blocks.

3.4 The Determination will last for five years. During this period the DAA will assume most of the risks, positive and negative, that out-turns do not accord with the forecasts made during the Determination. If the DAA out-performs the Commission's forecasts it retains all the extra profits while if it is unable to achieve the Commission's forecasts it incurs all the losses. The Commission does not ordinarily 'claw back' profits earned by the firm nor compensate the firm for unforeseen costs or demand shocks. This provides the DAA with an incentive to outperform the forecasts used in the price cap, by allowing the DAA to retain the benefits of any cost savings or additional commercial revenues it is able to secure for the duration of the Determination. The benefits from identifying additional efficiencies will be shared with users at subsequent determinations, when future price caps are set with reference to the more efficient cost base achieved by the firm.

3.5 For each of the five years there will be an annual cap. Each year the annual cap will change from the previous year's cap according to changes in the consumer price index (CPI) and an X factor. This is sometimes referred to as CPI-X regulation. For the forthcoming Determination, X is 2.5, i.e. the price cap falls by 2.5% per annum in real terms subject to the caveat that there are a number of (possible) step changes in the price cap, including a one-off adjustment to the price cap in 2010 because of financeability concerns and triggers for events such as T2 becoming operationally ready. The formulae do not explicitly include the X factor since its effect can already be estimated today. This permits the formulae to be presented in a marginally less cumbersome manner.

3.6 The issues paper published in October 2009 afforded parties an opportunity to comment on the Commission's general approach to regulation. This was arguably the time for parties to argue for a fundamental overhaul, as that would have allowed the Commission time to consult extensively with stakeholders on how to effect such a change and allow all parties to understand the likely implications of such a change. The responses to the draft determination of both the DAA and DACC include statements consistent with this sentiment: the DAA indicated support for reconsidering whether car park costs and revenues should be included in the single till, but suggested that there is insufficient time prior to the final Determination for such a change to be made in consultation with affected stakeholders;[6] DACC stated that its response concentrates on the proposed building blocks, noting that while there are alternative approaches to regulation that should be explored in the future these would require considerably greater consultation.[7]

3.7 The one party to express significant dissatisfaction with the Commission's current approach to regulation at the time of the issues paper was Ryanair. However, as noted in the draft determination, the Commission was unclear from Ryanair's submission what alternative approach to regulation the Commission might adopt. Ryanair's response to the draft determination outlined the various changes it sought with regards to airport regulation, repeating again its demand for a competing second terminal. Whatever the merits of this request, the Commission does not have the statutory powers to effect the changes sought: this is not an alternative approach to regulation that *the Commission* might adopt when making a determination governing airport charges at Dublin airport.

3.8 Ryanair also suggested making the Determination with reference to the level of airport charges set at other airports. The Commission has regard to the level of charges at other airports. However, it does not believe that it could make a determination that depended only on airport charges at other airports and still comply with its statutory objectives. Airport charges at other airports are not set with regard to the interests of current and prospective users at Dublin airport; they are not set to allow the efficient and economic development of Dublin airport to meet the reasonable requirements of current and prospective users at Dublin airport in an efficient and economic manner; and they have no regard to whether the level of such charges would enable the DAA to operate Dublin airport in a sustainable and financially viable manner.

3.9 There were a number of other changes to the general approach regulation suggested in responses to the draft determination. These related to the choice of a single or dual till, the implementation in practice of CPI-X regulation, and the appropriate allocation of risks between the DAA and users. No party opposed the proposed five-year duration for the

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[6] See page 70, DAA response to the draft determination.
[7] See paragraph 47, DACC response to the draft determination.

Determination, although Ryanair commented that the DAA's support contrasted with its demands for an interim review in 2006.

The use of CPI-X regulation

3.10 Forfás and the International Air Transport Association (IATA) both re-iterated support for CPI-X incentive regulation.

3.11 Ryanair believed that the Commission had erred in 2005 by applying a double negative when using the X factor, i.e. CPI - -X. It wondered what it meant to have an X factor of -4 when applying CPI-X regulation, and argued that the Commission should retrospectively correct this by clawing back all the earlier revenues that the DAA had been able to collect on the basis of what Ryanair considered had to have been an error. For the forthcoming price-cap period Ryanair was satisfied that the draft determination did not propose to continue with a double negative.

3.12 The Commission will not apply any claw back, since there was no error: it was intended when the 2005 determination was made that the price cap would rise annually in real terms for the duration of that determination. It does not have to be the case that prices for a regulated company should fall in real terms in all years. The literature motivating CPI+/-X regulation often refers to X inefficiency, a concept suggesting that there is scope for greater efficiency savings for the regulated company than in the general economy. The extra potential for cost savings is often attributed to the fact that prior to regulation such companies may have been relatively inefficient. Management incentives to realise efficiencies may have been muted by the absence of competitive pressures including, in many cases, the threat of a hostile take-over since the firm has been state-owned. In practice, even if regulated companies are found to be relatively inefficient it may not result in the regulator setting a price cap that falls in real terms, i.e. CPI-X. The price cap may also reflect judgements about the evolution of demand and possible economies or diseconomies of scale; the need for investments and judgements about how the costs of such investments should be recovered over time; or the possibility that the regulated firm is in a sector of the economy where technological progress is relatively more or less than for the general economy.

3.13 Bmi raised a concern about the current practice of adjusting the prices annually in response to the previous year's change in the consumer price index. While it supported indexation, bmi was concerned that the timing of the adjustment to the price cap could give rise to undesirable outcomes, with the cap being raised in response to past economy-wide inflation just as the rest of the economy was starting to reduce prices and vice versa. Bmi did not believe that any change to address this concern need advantage either the airport or users. The Commission has chosen not to alter its approach to address this concern. The Commission has concluded that any change is likely to result in a significantly more complex arrangement which at best would only achieve a very small gain. Options the Commission has considered include updating the price cap more frequently, possibly following the monthly publication of the CPI data, or relying on a forecast of future inflation rather than using last year's actual inflation rate (as measured by the change in the CPI). Other parties have previously commented to the Commission that they oppose frequent changes to the price cap, which argues against more frequent updates of the price cap. Using forecast future inflation would require identifying a suitable source for inflation forecasts and either accepting that there will be winners and losers when the actual out-turns differ to the forecast or requiring a further amendment to the price cap to correct for such differences between forecast and actual inflation.

Single or dual till

3.14 There were mixed responses to the draft determination regarding the use of a single till rather than a dual till. IATA strongly supported the single till. Ryanair suggested that a dual-till approach with fixed costs appropriately apportioned and a regulated per-passenger charge paid by the commercial sector to the aeronautical sector would "best approximate real market competitive economics".[8] The DAA argued that it would desist from undertaking commercial activities if they really were unprofitable and being subsidised by aeronautical services as Ryanair claimed. Both Ryanair and DACC argued that there needed to be more information made available about the implications of removing certain activities from the single till. The DAA contrasted DACC's opposition to removing car parks from the single till with Ryanair's support for a move to a dual till. Nevertheless, the DAA indicated support for the possibility of changing from the current single till arrangement following a suitable consultation process.

3.15 The Commission has decided to retain the single-till approach for this Determination. It will commence a consultation process on possible changes to the single till in 2010, with a view to informing the approach it adopts at future determinations. But there was insufficient time between receipt of responses to the draft determination and this final Determination to undertake the work required to effect a change, work that would certainly benefit from an extensive consultation with interested parties. The UK experience at the start of this decade when the Civil Aviation Authority (CAA) considered switching to a dual till provides some evidence of both the level of work required and how contentious the issues become. Responses to the Commission's issues paper, rather than its draft determination, were arguably the place for parties wanting to advocate such a major change in approach for this Determination.

Treatment of passenger numbers

3.16 The structure of the price cap means that the DAA assumes the benefits if passenger numbers are higher than forecast for the period covered by this Determination, and vice versa. A number of parties made comments that relate to how the Commission's regulatory approach allocates risks associated with changes in passenger demand at the airport, and the incentives in place for the DAA to manage this risk.

3.17 Both Aer Lingus and DACC suggested refinements to the price cap partly motivated by the downturn in passenger numbers since the 2007 interim review. DACC argued that the price cap should use the forecast passenger numbers at the time of that review as a lower bound for subsequent

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[8] See section 3, paragraph l, Ryanair response to the draft determination.

passenger forecasts used for the purposes of setting a price cap. This, DACC argued, would avoid an inequitable transfer onto users of the risks associated with changing demand conditions; would provide the DAA with incentives to grow traffic or manage costs during a downturn; and was consistent with the fact that the DAA had realised the benefits of higher than expected passenger growth in the past.

3.18 Aer Lingus suggested extending the assumed asset life of T2 when estimating how its costs should be recovered from airport charges, given that demand for the facility was now deferred. Aer Lingus also argued that the overall capitals costs associated with T2 (including return on and return of capital) should be recovered according to a schedule more like a mortgage-repayment scheme. Aer Lingus contrasted the Commission's proposed price cap with what happens to prices in a competitive market. In such markets, Aer Lingus argued that prices rise prior to a new investment and then fall once the new capacity is provided.

3.19 The Commission has not incorporated these suggestions from Aer Lingus and DACC. To adopt many of them would arguably entail overturning decisions made at the time of the 2007 interim review. The economic development of the airport requires the DAA to have confidence that commitments made by the regulator to allow certain costs to be recovered on one basis are not arbitrarily changed at a later date. The 2007 review focussed on whether and how the DAA's 2006 capital investment plan might be funded. The Commission noted that its decision then would have implications for future determinations, since the costs of the investment could not all be recovered prior to end 2009. Consultation paper CP1/2007, published early in the process leading to the final interim review determination, specifically invited parties to comment on how CIP2006 might be financed and how the risks might be allocated. Some of the questions posed at the time are reproduced in the box below.

Q4: Are there any reasons for allowing the DAA to start levying higher charges to allow it to fund CIP2006 in advance of the projects being completed?

Q5: Should charges to recover the costs of CIP2006 be front or back loaded?

Q6: What traffic forecast should be used when setting the price cap? Who should bear the risks if demand out-turns do not correspond to the initial traffic forecast?

Q7: What actions, if any, should the CAR take to strengthen regulatory commitment and credibility with respect to the level of charges it will allow in future determinations for the funding of CIP2006? Should the length of the price cap be increased?

Box 3.1: Questions in CP1/2007 "Consultation on Dublin airport charges following the Capital Investment Programme 2006"

3.20 Airlines, including Aer Lingus, in 2007 supported the decision not to raise prices in advance of the new terminal opening. For Aer Lingus now to argue that prices should have been high when there was insufficient capacity and should now fall as the new capacity becomes available is untenable in the Commission's view. Since there was no change in the price caps after the interim review, the DAA could not collect additional revenues in 2008 and 2009 to fund the T2 project. Future determinations (including this one) will be structured to allow the DAA to recover those investment costs.

3.21 The Commission is willing to consider various proposals concerning which parties should bear what risks relating to changes in demand for an investment. However, once it has made a decision that allocates such risks, the Commission does not propose to make a later adjustment when out-turns reveal the risk allocation has worked to the detriment of one party or another. A proposal to fix (some portion of) prices based on the 2007 passenger forecasts may have had merit in 2007. But since the DAA did not make an investment on that basis in 2007, the Commission has chosen not to retrospectively require the DAA to bear the burdens associated with a subsequent downturn in traffic (in the same way that the Commission would not have entertained a proposal to use the 2007 passenger forecasts had that forecast now appeared unduly pessimistic). The idea that the DAA should implicitly provide an option for airport users of taking the lower of a price cap set according to a 2007 passenger forecast or a price cap set according to a later passenger forecast is similarly rejected because it was not in place at the time that the DAA undertook the investment. Moreover, were the Commission to adopt such an approach, the asymmetry would necessarily have implications for what return on capital it allowed the DAA to recover, since its exposure to market risk would be much greater.

3.22 There is a contrast between how airport charges respond to fluctuating demand during a determination and how a new determination may entail a step change if demand forecasts are very different to previously. The determination is an opportunity to reset all relevant variables. Having periodic determinations guards against the possibility that the price cap will deviate significantly from the airport's actual cost base, either up or down. But this does mean that at the time of a determination it is possible that there will be a step change in the level of airport charges (up or down), a change that the Commission might seek to avoid within a determination.

3.23 Aer Lingus' suggestion that the Commission be guided by mortgage payment schedules when allowing the DAA to recover T2 costs would actually result in a higher price cap. The Commission has not adopted the suggestion since it seems contrary to what Aer Lingus seeks, as well as representing a deviation from the regulatory proposals that were in place at the time the DAA undertook the investment. For the purposes of recovering T2 capital costs, the Commission identified two alternatives to straight-line depreciation. The first, an "annuity approach", would have allowed the DAA to collect the same amount for each year of the asset life. This has similarities to a mortgage payment plan. In the early years, most of the payment relates to interest charges (return on the capital), while in later years a greater proportion of the sum spent pays down the principal (return of capital). While the DAA would receive the same sum every year, the per-passenger charge would vary since in years with lower passenger numbers there would be fewer passengers to share the annual annuity charge. A "unitisation approach" seeks instead to structure repayments so that users across time are treated equally. The Commission adopted such a schedule for the recovery of T2 costs. Consequently, the price cap in 2010-2014 is lower than it would be if the Commission switched to a straight annuity approach.

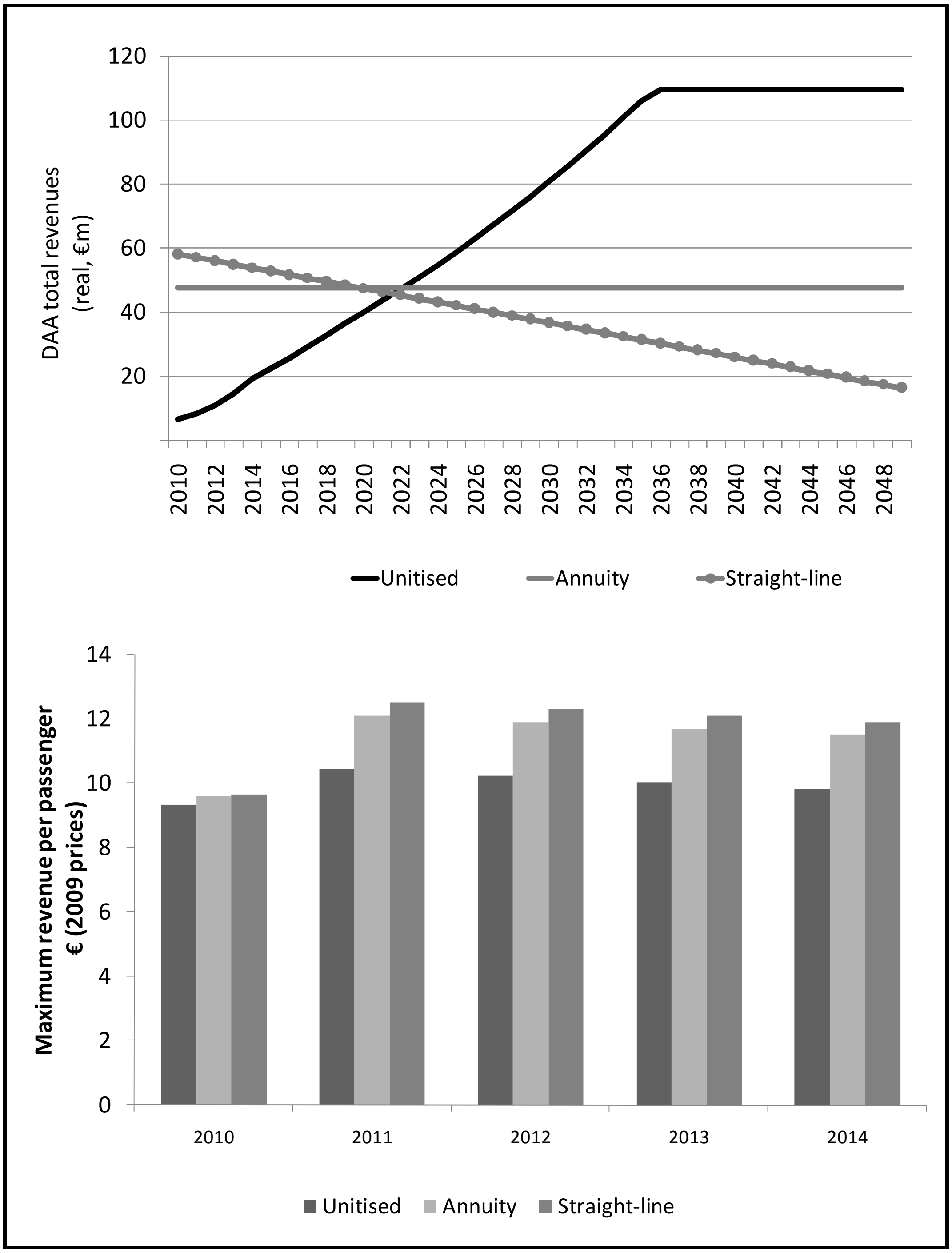

Figure 3.1: Effect from different depreciation profiles on timing of DAA recovery of T2 costs and 2010-2014 price cap

3.24 Forfás wanted the Commission to provide the DAA with incentives to offer flights to more destinations. The Commission has not acted specifically on this request for the following reasons. The current regime already provides financial incentives for the DAA to increase passenger throughput at the airport. The DAA can already structure airport charges so as to offer carriers incentives to fly to new destinations if the DAA believes this will increase overall throughput at the airport. Sub-caps requiring lower charges on flights to new destinations would be difficult to estimate at the time of the determination and risk restraining the DAA in its ability to alter prices in responses to changing demand at the airport during the period of the determination. Moreover the interests of current and prospective users flying to destinations currently served by Dublin airport would not be met if the Commission required them to pay more so as to subsidise new routes that the DAA may not otherwise have offered. (If there is a wider economic interest in Dublin airport having routes to new destinations, it is questionable whether current and prospective users of Dublin airport should be the ones required to subsidise these new routes.)

4. Quality of Service

4.1 The Commission has introduced a quality term to the price cap formula for this Determination. This will create a direct link between the price cap on airport charges at Dublin Airport and the quality of service delivered by the DAA. The service quality term can reduce the price cap by 4.5% per annum, should the DAA not meet all quality targets for all four quarters in a year. There are 13 service measures in the monitoring scheme, although only 12 have implications for the level of airport charges. The table below presents the measures, the source of the results, the targets for each measure and the related financial incentive.

Service quality measure	Source	Target	% weight in price cap
Security passenger search time no longer than 30 minutes	DAA	100%	1.50
Percentage of time out-bound baggage handling system unavailable for more than 30 minutes during hours of operation	DAA	0%	0.75
Percentage of time in-bound baggage handling system available during hours of operation	DAA	99%	0.25
Ease of way-finding through airport	ACI	3.7	0.25
Flight information screens	ACI	3.8	0.25
Cleanliness of airport terminal	ACI	3.6	0.25
Cleanliness of washrooms	ACI	3.3	0.25
Comfort of waiting/gate area	ACI	3.0	0.25
Courtesy/helpfulness of airport staff (excluding check-in & security)	ACI	3.8	0.10
Courtesy/helpfulness of security staff	ACI	3.8	0.15
Overall satisfaction (all passengers)	ACI	3.5	0.25
Communication/telecom/e-facilities	ACI	3.1	0.25
Feeling of being safe and secure	ACI	3.8	0

Table 4.1: Quality of service regime

4.2 The quality monitoring scheme includes twelve measures that may affect the level of airport charges that the DAA may collect from users. Nine of these measures will depend on the results of passenger surveys, an exercise currently carried out by Airports Council International (ACI) on a quarterly basis. The three other measures, relating to security passenger search times and the availability of out-bound baggage and in-bound baggage systems, will require the DAA to collect data.

4.3 The following changes have been made to the proposed quality monitoring scheme since the draft determination:

- The maximum level of the penalty is 4.5%, as opposed to 4% in the draft determination, following an increase in the weights attached to some of the non-survey measures of service quality;

- The measure of security queuing times will focus on delays longer than 30 minutes, rather than processing most passengers within seven minutes;
- A measure for outbound-baggage handling has been introduced;
- There is no longer any measure relating to stand availability; and
- The scheme now includes the courtesy and helpfulness of security and non-security airport staff, rather than only the results for airport staff excluding check-in and security.

4.4 Respondents to the draft determination generally welcomed the introduction of a monitoring scheme for quality of service at Dublin airport, notwithstanding any criticisms they might have with the Commission's specific proposals. For example, Forfás stated that the inclusion of quality of service indicators is a beneficial development from the perspective of all airport users. The IDA observed that the airport's image and its clients' passenger experience can have a significant impact on their impression of and investment strategy for Ireland. It wanted the cost structure at Dublin airport to be as competitive as possible by international standards while at the same time providing service of the highest quality. IATA continued to support the introduction of service-quality regimes at airports to reduce the temptation for thrifting by airports challenged with economic regulation. Aer Lingus generally supported the Commission's plans to introduce quality of service targets for Dublin airport with associated rebates to users to realise these targets. Fáilte Ireland said that the service-quality measures were particularly welcome. It stated that the quality of the service experienced at Dublin airport greatly influences the perceptions formed by visitors to Ireland. On this basis, Fáilte Ireland pointed out that the effective operation of Dublin airport is an important component within Ireland's wider economic performance. Dublin Chamber welcomed the links being made by the Commission between price and quality of the services at Dublin Airport. Chambers Ireland supported a regulatory regime that ensures a rise in service delivery commensurate with a rise in airport charges.

4.5 The remainder of this chapter follows a similar structure to previous Commission documents looking at quality of service. It first addresses concerns about what should or should not be included within any scheme seeking to measure quality of service. It then discusses how these various aspects might be measured. Finally, it discusses how the measures might affect the cap on charges allowed in the Determination and the associated practicalities that arise.

Measures of quality of service

4.6 The quality of service monitoring scheme has been developed over seventeen months, dating back to the publication of CP3/2008.[9] , Since then the Commission has received support for the development of a quality of service scheme and much input from a wide range of interested

[9] Commission for Aviation Regulation (2008) "Quality of Service at Dublin Airport" www.aviationreg.ie

parties. Ryanair's suggestion that the Commission has failed to identify what is meant by a good quality of service can only be considered to the extent that parties may never agree on what constitutes good quality of service. The Commission has sought, through various consultations, to allow all parties an opportunity to express their views.

4.7 It has been very clear from the responses received over that time period that opinions differ, at times greatly, on what areas should be the focus of a quality monitoring regime at Dublin Airport, how those areas or services should be measured and whether or not there should be financial incentives associated with the measures. Partly to reflect the different preferences of different parties and partly to develop a regime that does not provide incentives for the DAA to focus on a narrow aspect of service quality, the Commission has selected a variety of measures of quality for its monitoring scheme. It believes that having a wide range of measures of service quality may enhance the robustness of the overall scheme.

4.8 Many responses to the draft determination welcomed the introduction of the monitoring scheme with little attention to what should be measured. Many of them had previously given suggestions on the appropriate metrics in response to earlier consultation papers.

4.9 Most of the specific criticism of the proposed service quality measures came from airline users. Aer Lingus wanted the Commission to enforce a full service-level agreement on the DAA, and felt the proposals in the draft determination fell short of such an agreement. Ryanair recommended the system agreed at Stansted airport, which focuses on security queuing time and baggage handling. DACC claimed that the proposals in the draft determination relied too heavily on subjective passenger measures which are not targeted enough to improve service quality and deliver results for users. It recommended that the focus should be on those aspects of an airport's performance which impact on the punctual operation of flights, suggesting that the passenger facing measures were of second order importance to the two most critical areas: outbound security and outbound baggage.

4.10 The airlines were critical of relying on ACI quarterly survey results. Aer Lingus was concerned that the subjective survey measures would not adequately reflect the airport's true performance. Ryanair claimed that the passenger survey responses are an ineffective measurement tool and that it is wrong of the Commission to apply penalties based on these defective subjective surveys which are an inadequate tool even in the irrelevant areas that they seek to measure. In contrast, the DAA was in broad agreement with the Commission's choice of the nine proposed ACI results.

4.11 The Commission has decided to retain the ACI survey results for the purposes of monitoring service quality. It rejects the suggestion that a minimum survey size of 1,400 returned questionnaires is necessarily too small. The Commission has spoken with a leading provider of surveys and market intelligence who advised that a survey must target at a minimum fifty people per category surveyed. Since the ACI survey does not distinguish according to class, age or gender, a survey that targets at minimum 350 responses per quarter should suffice to gather intelligence on passenger perceptions of Dublin Airport.

4.12 The Commission is keen to include measures of service quality relating to concepts such as airport cleanliness or overall satisfaction. The measures captured by the survey results relate to concepts of service quality respondents have indicated are important to them. No-one has provided the Commission with a superior alternative to survey results for measuring such aspects of service quality.

4.13 There were some suggestions on the measures based on the results of the ACI survey. Forfás could not understand why the indicator relating to 'courtesy/helpfulness of airport staff' excluded security staff, particularly as all outbound passengers will interact with security staff. The Commission has accepted this representation and introduced a separate measure from the ACI survey that asks passengers to rate the 'courtesy/helpfulness of security staff'. The final service quality scheme still attaches the same financial incentives as in the draft determination for 'courtesy/helpfulness of staff' (0.25%) but it now depends on two separate measures.

4.14 Forfás was pleased to note the inclusion of communication and e-facilities in the service quality measurements as well as the comfort of waiting/gate areas. In contrast, the DAA was concerned with its inclusion as a service quality measure since the user of internet facilities requires a separate charge that is not included in the cap on airport charges. The DAA argued that such facilities are only of interest to business travellers, who represents less than 25% of passengers. It favoured a service-quality scheme that focussed on broader measures and suggested that the Commission should either remove this measure or apply a lower weighting to reflect the fact that it only applies to a subsection of passengers. The Commission has rejected this representation, given the increasing use of laptops and hand-held technologies that support wi-fi connectivity among all sectors of the population.

4.15 In relation to what were termed airline-facing measures in the draft determination – security queuing times, contact stand availability, and inbound baggage equipment availability – the Commission received a number of comments from airlines and the DAA.

4.16 Both Ryanair and the DAA criticised the proposed measure for contact-stand availability. Ryanair thought the measure was meaningless, particularly given the Commission's trigger for additional stand capacity. The DAA claimed that there is no internationally agreed definition of a contact stand and wanted to reserve the right to change the definition of a contact stand on a case-by-case basis if any such measure was included. There was also concern expressed that the measure needed to control for the fact that some airlines may not want a contact stand; the measure should not penalise the DAA in such circumstances. The DAA proposed excluding all departing movements which are pure cargo, general aviation or diverted and positioning flights from any such measure.

4.17 The Commission has accepted the concerns expressed relating to contact-stand availability measures and decided not to include any such measure in the quality of service regime. In making this decision, it has been aware of airline dissatisfaction with the recent closure of the temporary boarding gates (TBG). The DAA closed this facility in October 2009, despite the opposition of the airlines. The Commission has sought from the DAA its rationale for this decision to close the facility, including how the DAA thinks it will affect service quality. The DAA said that the closure of the TBG was an operational decision and not related to service quality. It cited evidence from passenger surveys showing that passenger satisfaction with the TBG is lower than at other departure gates. The DAA also claimed that the closure of the TBG will not result in a net loss of stands.

4.18 To address the concerns of the airlines, the Commission considered the case for including a service quality measure relating to the number of contact stands, or a measure relating to stand utilisation rates. It rejected the former as inconsistent with the general philosophy behind the service-quality scheme of encouraging operational efficiency for a given capital stock. The provision of contact stands is related to the DAA's investment plans; the Commission has not made any allowance for further investments providing contact stands at Dublin airport. Of interest to the Commission is whether the DAA will be able to continue offering the same level of service as it offered before it closed the TBG. The passenger survey results may partially capture this effect. Another way to capture its effect would be to see if the TBG's closure has a material effect on stand-utilisation rates. However, the Commission was advised that the airlines have divergent views on whether such a measure should relate to the number of passengers or the number of aircraft movements that have access to a contact stand. In the absence of a preferred definition of stand utilisation from the parties concerned about the TBG's closure and given that the interaction between airline demand for contact stands and the structure of airport charges the DAA sets will affect recorded stand-utilisation rates, the Commission has not included in its service-quality regime any measure of contact-stand availability.

4.19 For baggage handling the airlines argued that access to outbound baggage handling facilities was more important. For their own business models, they argued that security delays and breakdowns in the outbound baggage handling system were the main priorities. They argued that these were also issues of most concern to passengers. The Commission has accepted that it should include a measure reflecting the importance of an airport providing a suitable outbound baggage handling system. The DAA has previously expressed concern that including such a measure runs the risk of penalising the DAA for faults of other parties and wasting time ascertaining who is to blame for a stoppage when the focus should be on fixing the system as quickly as possible. The Commission believes that the proposed measure, discussed below, strikes a suitable balance between providing incentives for the DAA to maintain a functioning outbound baggage handling system while not wasting unnecessary time detailing who caused every minor breakdown.

4.20 The Commission has retained a measure relating to the availability of an inbound baggage handling system.

Targets

4.21 The Commission has retained the guiding philosophy in its draft determination of seeking to set quality of service standards consistent with what the DAA currently achieves. That was also the assumption for the purposes of estimating the efficient level of costs at the airport.

4.22 A number of respondents to the draft determination suggested that a higher quality of service should be targeted. SIPTU suggested the price cap should enable the DAA to achieve the highest levels of service quality. The Irish Business and Employers Confederation (IBEC) said that significant improvements to the passenger experience are urgently required and that the focus of the Commission’s work should be on enabling the DAA to deliver the high-quality facilities a competitive economy requires. In contrast, Ryanair said that there is no basis for users to be required to pay additional amounts for unnecessary ‘enhanced’ service levels. The Commission has decided not to set higher targets. To increase the service quality target may have implications for assumptions about the efficient level of costs and therefore the appropriate level of any cap on airport charges. On balance, the Commission does not think it should opt for a higher service quality target if this also requires a higher price cap given the already significant rise in airport charges proposed.

4.23 For those measures of service quality depending on survey results, the targets are set according to the average score achieved between Q1 2006 and Q2 2009. Forfás was disappointed that the Commission was not benchmarking the DAA against comparator airports and was concerned that service standards will converge to the average airport. It wanted the Commission to benchmark Dublin airport against airports in other capital cities or other hub airports. The Commission has rejected this submission because it does not think that there is a case for setting more challenging targets if they will require higher airport charges. Also, the Commission does not necessarily agree that just looking at results at Dublin airport allows service standards to decline relative to other airports. Passengers are likely to become less tolerant of existing service levels, and consequently give poorer survey responses, if the DAA fails to improve service at the same rate as other airports.

4.24 The Commission has adopted the target proposed in the draft determination for access to inbound baggage handling systems: the percentage of time that the system is available during hours of operation. This is consistent with the existing service-level agreement. The DAA’s representation included the definition it uses to measure the adequacy of the inbound-baggage system in its service-level agreement. The Commission has adopted this measure for this Determination.

4.25 For access to outbound-baggage facilities and security queues the Commission has decided to focus on providing incentives for the DAA to avoid especially long delays. The target relating to outbound baggage facilities is that there should never be delays of more than 30 minutes affecting airlines and/or their ground handlers at the check-in desks. The DAA will have failed to satisfy this metric if a baggage belt connecting to a check-in area is unavailable for more than 30 minutes *and* the DAA is unable to provide an affected airline or ground handler access to an alternative baggage belt within 30 minutes of the party notifying the DAA that it requires access to an alternative baggage belt. The Commission does not believe that this should have implications for the operating costs that the DAA requires. From meeting with the DAA, the Commission believes that the DAA already moves handlers as a matter of course in the rare instances when delays exceed 30 minutes. Given the focus is on avoiding lengthy delays, the Commission thinks that this significantly lessens the DAA's concerns about identifying who caused the system to stop operating. The Commission accepts that there will be occasions where the system stops operating because of the actions of agents working for airlines or ground handlers loading bags incorrectly.

4.26 For security queuing the Commission also proposes to focus on avoiding delays longer than 30 minutes, rather than targeting an outcome where passengers get though the gates in less than 7 minutes for 95 per cent of the airport's operating hours. The change responds to representations from the airlines, who argued it was long delays that most inconvenienced users (both airlines who might have to delay flights, potentially adversely affecting the rest of their daily schedule, and passengers who might miss flights). In making the change, the Commission does not believe it should affect the DAA's operating costs materially. The DAA will still have to process the same number of passengers and it already satisfies the target at almost all times.

4.27 The DAA suggested that changes in the arrival patterns of passengers create problems that may hinder its ability to roster appropriately and consequently achieve security queuing targets. The Commission is generally unsympathetic to this argument. There should be scope for the DAA to manage the airport in a way that provides incentives for airlines and ground handlers to help the DAA avoid unexpected passenger flow peaks, including through adjustments to the structure of charges.

4.28 The target requires that all security queues are less than 30 minutes. After T2 opens, the DAA will be expected to ensure that in both facilities passengers do not have to queue for more than 30 minutes.

4.29 For the purposes of measuring time in a security queue, the Commission proposes to define this as the time spent waiting to get to the point where boarding cards are checked. The queue start position will be defined as where the passenger joins the back of the queue (which may or may not be inside the security queue area). The queue end position is where the passenger hands over their boarding card to be checked. Passengers still have to spend time after that before they and their carry-on baggage are screened. Nevertheless, if there are delays in this area, it will ultimately feedback and affect the time spent queuing to get to the point where boarding cards are checked. The proposed measure allows the data to be collected and/or audited by parties with only access to the landside of the airport.

4.30 The DAA responded to the draft determination by seeking properly defined exemptions to when it is expected to meet a target. It gave as examples of when an exemption should apply changes to security regulations, the reinterpretation of existing regulations and when events out of the DAA's control occur. The Commission agrees that in the circumstances outlined, there would be a case for waiving a target. The draft determination indicated that candidates for waiving a target or targets included increased security requirements at short notice, severe disruption caused by the weather, or any malicious act by a passenger, airline or airline customer.

The Commission has retained this caveat, which is similar to the one used by the Civil Aviation Authority (CAA) in the UK.

Implications for the cap on airport charges

4.31 There continued to be diverging views on whether and what form financial incentives associated with service quality might take. The Commission has previously considered such arguments following receipt of submissions to both CP3/2008 and the issues paper.

4.32 The DAA continued to argue that there was no case for linking an annual price cap to its achievements of certain levels of service. It suggested that the airlines had not previously shown an interest in how data was collected in the service-level agreements, and were only interested now because of the potential to secure lower airport charges. The DAA argued that the Commission had failed to establish the need for any link with the price cap. It referred to the introduction of similar schemes at the three regulated London airports in the UK, which it claimed had only followed the results of Competition Commission reports that

- Concluded that a course of conduct had operated or might be expected to operate against the public interest
- Specified effects adverse to the public interest which that course of conduct had or might be expected to have; and
- Concluded that the adverse effects could be remedied or prevented by the imposition of conditions.

4.33 The DAA argued that the Commission had failed to conduct similar analysis and that it consequently had no basis for introducing such a scheme. It observed that the targets proposed in the draft determination were already being achieved at Dublin airport, and the Commission had noted that service standards were improving. In such circumstances the DAA thought there was no case for any penalties. The DAA also argued that passengers are unlikely to receive any rebate from a reduced price cap because of any delay or deterioration in service quality.

4.34 The Commission continues to reject representations against any link between the level of airport charges and service quality. The introduction of such a scheme in this Determination and not before is because the Commission has finally had time to consult and develop a scheme it considers to be appropriate. It believes that this Determination, by including such a regime, is better able to protect the interests of current and prospective users. The Commission does not need to make a public-interest finding to introduce such a scheme. The Commission accepts that the approach does not ensure that the individuals most affected by any deterioration in service quality are compensated financially from the regime should penalties actually apply. But by providing incentives for the DAA to offer an acceptable level of service, the Commission has sought to protect current and prospective users from low service quality.

4.35 Other respondents to the draft determination suggested that financial incentives to improve service quality could take the form of an increase to the price cap. The IEA recommended that the Commission takes a carrot and stick approach, offering a 4% increase of the maximum price cap if the service quality standards are met, as well as the 4% decrease, if the standards are not met. Fáilte Ireland noted in its response that failure to meet these targets could result in a reduction in the price cap of up to 4%. It considered that a failure is comparable with an operational inefficiency at the DAA and that the DAA is sitting at a point below its efficiency frontier. It also stated that a service failure is evidence of a need to increase spending on service maintenance – which would lead to an increase in the price cap.

4.36 The Commission has not chosen to re-state the scheme by offering bonuses for meeting quality of service targets. Such a change would affect the presentation, but potentially have no implications for the level of airport charges, that the DAA was allowed to collect under the Determination. The Commission could have set the draft determination with a cap 4% lower and then allowed for the possibility that it would increase by up to 4% if the DAA met all the targets set in the price cap. IATA agreed with the Commission approach to develop a service quality scheme based on penalties without bonuses.

4.37 The IEA's representation implicitly proposed increasing to 8% financial incentives for the DAA associated with service quality at Dublin airport. The airlines also argued for the scheme to have increased financial incentives, although they did not favour any form of bonuses nor the possibility of the Commission raising airport charges to facilitate a higher quality of service. DACC, Ryanair, Aer Lingus and IATA suggested that if a quality monitoring regime is introduced then the associated financial incentives need to be large. DACC considered that the penalties should be linked to 7% of airport charges revenue not 4%. Ryanair stated that the Commission failed to explain in the draft determination why the proposed maximum sanction of 4% is substantially lower than the 7% penalty agreed between users and BAA at Stansted airport.

4.38 The airlines also expressed some concern about the relative weightings the Commission attached to the different measures of service quality. Ryanair thought that spreading the penalties across many headings would make the regime ineffective for users. DACC proposed that at least 75% of any of the penalties should be applied to hard objective measures rather than survey data. It suggested that even setting a penalty of up to 5.2% for long delays in security queues or breakdowns in the outbound baggage handling system would result in potential rebates that were worth less to the airlines than the associated cost to them of such failings at the airport. Nevertheless, the higher penalties were needed to provide incentives for the DAA to avoid providing such poor service quality in the first place.

4.39 DACC argued for more prompt rebates when the DAA failed to meet quality of service targets that affected turnaround time. It felt that incorporating the penalty into an annual price cap meant would not get the intention of the relevant DAA management in the way that a requirement to pay a rebate immediately would. The Commission has not acted on this representation because it does not have the powers to do so while making a determination governing the level of airport charges for the period of year. The possibility of introducing a multitude of sub-caps to achieve such an outcome is likely to have a number of unintended consequences.

4.40 Nor has the Commission accepted the representation that it should reduce the number of measures used in the scheme and/or the weights attached to many of them. It has sought to include a basket of measures to minimise the risk that the DAA will have perverse incentives to focus on a couple of particular targets to the detriment of the overall airport service level. The recent complaints from airlines concerning the closure of the TBG is an example of an event that has diminished their perception of service quality at the airport but that would not be captured by the measures relating to security queues and outbound baggage handling facilities that the airlines have emphasised.

4.41 The Commission has continued to apply a service-quality regime that could result in the allowed level of airport charges being up to 2% lower should the DAA fail to meet any of the targets measured using passenger-survey data. This corresponds to 0.5% in each quarter. With the exception of the two measures relating to helpfulness and courtesy of staff and the feeling of being safe and secure, the weight will mean the cap on airport charges could be reduced by 0.0625% for each quarter the target is not met (this corresponds to 0.25% for failing to meet the targets for a year). The weights will be 0.0375% each quarter for failing to meet the target for the courtesy and helpfulness of security staff, and 0.025% each quarter for the courtesy and helpfulness of staff excluding check-in and security. The weightings for these latter two measures correspond respectively to 0.15% and 0.1% reductions in the annual price cap if the targets are not achieved for four consecutive quarters (giving a total weight for survey results relating to staff courtesy and helpfulness of 0.25%, the same as for the other survey results). The relatively higher weighting given to security staff reflects a judgement by the Commission that more users will interact with these staff. There is no financial penalty for the survey result relating to feeling safe and secure.

4.42 Because of possible delays in the reporting of the ACI survey results, the annual price caps will depend on the ACI survey results for first and second quarters of the regulatory year in question and the third and fourth quarters of the preceding year. For 2010, only the results in the first two quarters of 2010 will apply; consequently the price cap will only reduce by, at most, 1% if for all the surveys the targets are not met in 2010.

4.43 The Commission has slightly increased, to 2.5%, the amount it will reduce the price cap by in the event that the DAA consistently fails to meet the targets set for the last three measures of quality of service, relating to security queues, inbound and outbound baggage. Moreover, the Commission has applied relative weightings to these three measures that reflect its judgement about their relative importance to users, particularly the airlines. Long delays in security queues could result in a price cap being as much as 1.5% lower. For the outbound baggage system, poor quality service could reduce the price cap by as much as 0.75% in a year, while for inbound baggage the weight is 0.25%. For inbound baggage, the average quarterly results will be applied, with the price cap being reduced by 0.0625% for each quarter that the target is not met.

4.44 For security queues and outbound baggage, there will be an adjustment to the price cap for every day that the DAA breaches the standards set, subject to an overall limit on the annual cap equal to the weights of 1.5% and 0.75% outlined above. For these limits to apply, the DAA would have to fail to meet the target on 30 days in a year.

4.45 The onus will be on the DAA to demonstrate that it has achieved the service targets. It will consequently need to participate in the relevant ACI surveys. It will also have to collect appropriate data for the security queues and the availability of the inbound and outbound baggage systems. The Commission does not believe these requirements place an unnecessary burden on the DAA. It already participates in the ACI survey and should already collect suitable data for security queues and the inbound baggage system under the existing service-level agreement. The only measure for which it may not collect data relates to the outbound baggage system's availability, although the DAA already has monitoring equipment that provides logs of when different parts of the system are down. Should the current technology not allow automated monitoring and reporting of downtime for the check-in outbound baggage belts, it should be relatively simple to collect appropriate data using a simple, manual regime that also measures how long it took between ground-handlers and airlines requesting a move to a new check-in area and the move occurring.

4.46 The Commission will seek to satisfy itself that the DAA is collecting the data for the three measures it is responsible for in a reasonable manner. This may include audits. The Commission accepts that over time, the way the data are collected may change. For example, the DAA may adopt more technical solutions for measuring security-queuing times.

4.47 Should the ACI survey cease or change in a manner that makes some or all of the results unsuitable for use with the targets currently set, the Commission has reserved the option of revising the QS measure. Possible changes include revising the target number (in the event that a different scale is used), ignoring the measure for the purposes of estimating the price cap, commissioning its own survey, or using the results from a different survey that measure the same aspect of service quality (possibly with a corresponding adjustment to the target score to be achieved). In all such cases, the change will never result in the overall financial penalties exceeding 4.5% in a year, nor will the financial incentives associated with results from survey data exceed 2%.

4.48 The Commission has increased the overall size of penalties associated with poor service quality to 4.5%. The scale of financial incentives chosen reflects a balance between protecting the interests of current and prospective users and not jeopardising unduly the ability of the DAA to operate the airport in a sustainable and financially viable manner. In the UK the financial incentives are greater. It may be in subsequent determinations the Commission decides to increase the size of the financial incentives. But since this is the first time that the DAA will have been subject to such a scheme, the Commission has considered it prudent to introduce penalties that are lower than at Stansted or at other CAA-regulated airports in the UK.

5. Passenger Forecasts

5.1 The Commission's passenger forecast at Dublin airport for the next regulatory period is shown in the table below, along with the forecast used in the draft determination. The passenger forecast is a key input to the overall price-cap calculation. Not only is it the denominator in the calculation of the *per passenger* price cap, but it is also directly affects the forecasts for the overall levels of opex and commercial revenues. It is also relevant when considering investment needs at the airport, and the financial viability of the DAA.

Passenger forecasts	2009	2010	2011	2012	2013	2014
Draft determination (mppa)	21.0	20.7	21.2	21.8	22.7	23.8
Actual forecast	20.5	19.5	19.9	20.5	21.3	22.4

Table 5.1: Passenger forecasts for Dublin airport, 2009-2014

5.2 The final forecast differs from the forecast in the draft determination in the following ways:

- A lower figure is projected for the 2009 outturn. This lower figure largely reflects the fact that recent traffic outturns indicate a lower level of traffic in 2009 than that which the Commission (and the DAA) expected at the time of the draft determination.
- The 2010 passenger forecast is lower than might be expected from just implementing a simple GDP-growth driven model. The Commission has accepted the representations from a number of parties, including both the DAA and the DACC, and assumed a lower level of traffic in 2010. This lower base affects forecasts in later years.

5.3 Since the draft determination the Commission has considered new information potentially relevant for its forecast, including revised GDP forecasts and actual passenger numbers at Dublin airport. The Commission has also considered the representations received from various parties to its approach for generating a forecast. The table below summarises some of the comments parties made about the passenger forecast used in the draft determination.

Comments on the modelling approach
- Commission model is simplistic and the Commission should use the DAA model (DAA) - Need to incorporate price-sensitivity analysis into the forecast (DACC and Ryanair)
Comments on the assumptions – drivers and elasticity
- No evidence of a GDP elasticity of one in recent years (DACC and Ryanair) - GDP elasticity is higher than one (UPROAR) - GDP forecasts used by the Commission are out-of-date and overly optimistic (Ryanair) - Commission should revisit GDP and 2009 passenger assumptions closer to the time of the final determination, current expectation for 2009 is 20-20.5mppa versus 20.9mppa figure in the draft determination (DAA)

Table 5.2: Summary of responses to the draft determination

5.4 In addition to the comments summarised in the above table, both UPROAR and Ryanair submitted their own 2010-14 traffic forecasts. The Commission had previously seen passenger forecasts from DACC and the DAA. These different forecasts are illustrated in the chart below. While not providing its own forecast for Dublin airport, IATA thought that the Commission's forecast in later years was overly pessimistic by as much 10% (2.4 million passengers). IATA agreed with the Commission that traffic at Dublin airport was closely linked to Irish GDP. It noted that both IATA and EUROCONTROL currently forecast a quicker return to growth than the Commission.

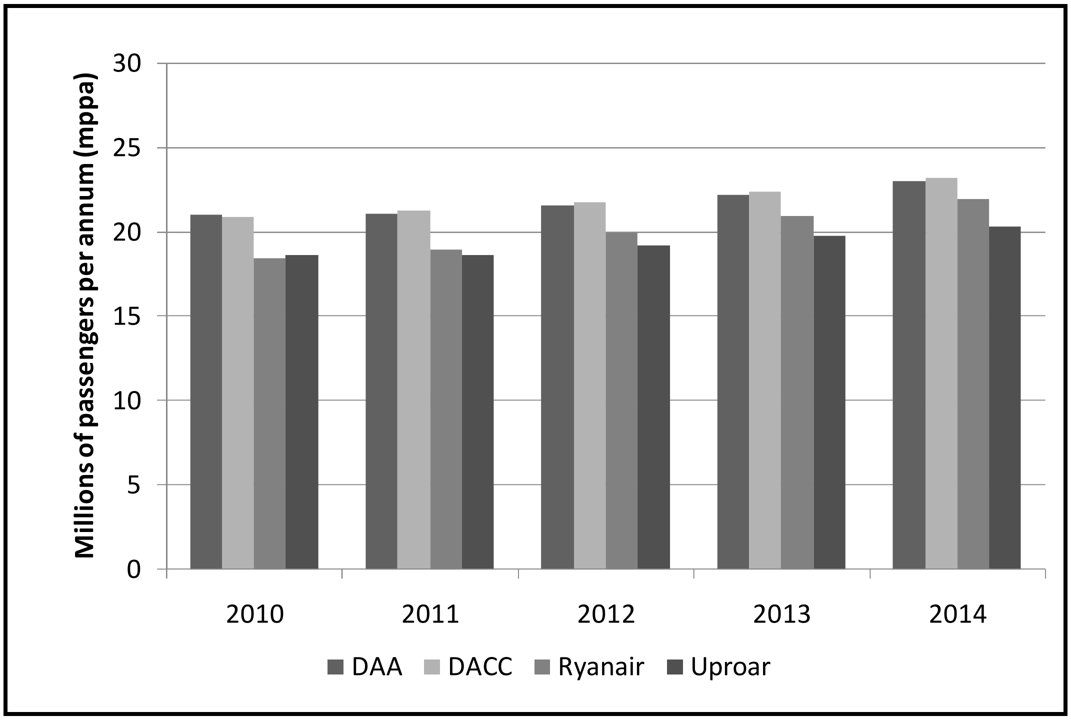

Figure 5.1: Passenger forecasts

Source: DAA, DAPF09-04 (March 2009); DACC, "Dublin Airport Capital Development Requirements (March 2009); Ryanair, Response to Draft Determination (August 2009); Uproar, Response to Draft Determination (August 2009).

5.5 Given the differing views, the Commission could not merely accept the DAA's forecast without question. To help it assess the competing merits of the different forecasts parties were making, the Commission invited the DAA, DACC, Ryanair and UPROAR to provide details on the models they used to generate their forecasts. Based on the response to this request, it appears that many of the parties make final forecasts that include an element of judgement, rather than relying solely on the numbers generated by a model. The only variables that the Commission identified in any of the models as affecting the forecast, other than Irish GDP and ad hoc adjustments, were GDP estimates for other jurisdictions (although DACC also provided accompanying materials setting out how passenger numbers may respond to changing levels of prices). Based on this feedback, the Commission has assessed whether there is a case to include:

- GDP estimates for countries other than Ireland; and
- An adjustment to reflect changing price levels.

Use of other GDP estimates

5.6 Both the DAA forecast and, implicitly, the DACC forecast depend in part on GDP forecasts for other countries as well as Ireland. DACC's base model applied the DAA model's forecast passenger growth to generate its own forecasts. The forecasts differ because DACC assumed lower passenger numbers in 2009 than the DAA.

5.7 The DAA in-house forecasting model outputs annual passenger forecasts for different routes. The individual route forecasts are summed to obtain an annual passenger forecast. Forecasts for each route are calculated in a two-step procedure.

- In step one, DAA inputs assumptions for GDP growth and elasticities for Ireland and up to five other countries, depending on the origin and destination (O&D) composition of passengers on a specific route. The composition of O&D passengers is route and year specific and is derived from historic DAA surveys (the current DAA forecast uses 2007 survey data). The DAA model allows for (assumed) changes in the composition of O&D composition for a given route over time. The weighted sum of GDP growth and the elasticity, with the weights given by O&D composition assumptions, outputs a 'potential growth' figure for a route in given year.

- Step two involves the DAA making a number of 'off-model' adjustments to the 'potential growth' forecast. These adjustments are made on the basis of beliefs or known information the DAA has about potential airline-specific changes on specific routes in the future. For example, if the potential growth figure for a given route is an increase of 5,000 passengers, but an airline on that route has informed the DAA that it intends to stop the service in the next year, thereby causing traffic to fall by, say 15,000, the final forecast would include a negative traffic adjustment of minus 20,000 in order to arrive at the expected net figure of minus 15,000. The number of such adjustments varies by year and route, and not all routes are adjusted.

5.8 In contrast to this approach, the Commission did not attempt to forecast demand by route. Instead it attempted to forecast overall passenger numbers at Dublin airport, and used only data on Irish GDP and past passenger numbers to do so. The DAA criticised this approach for being overly simplistic. The Commission does not accept that its less complex approach is necessarily worse than the DAA's for the purposes that the Commission wants to generate forecasts.

5.9 The Commission wants its model to forecast total passenger numbers at Dublin airport, and is not seeking to identify separately forecasts for individual routes. For the DAA's purposes, route-by-route forecasts may be important as well. At a route level, GDP growth by O&D of passengers on a route may be important for forecasting purposes. It is an empirical question whether such information is important for an aggregate forecast, a question that the Commission has considered.

5.10 To assess whether GDP growth for other countries has a statistically significant effect on overall passenger numbers at Dublin airport, the Commission has undertaken further econometric work. It added GDP growth in the European area, USA and UK as explanatory variables to the model it relied on in the draft determination. The results of the regression are shown in the table below.[10]

Long-run model	Coefficient	Standard error
Constant	-32.91	5.96
GDP (Ireland)	-1.00	0.29
GDP (US)	1.75	0.81
GDP (UK)	2.27	1.09
GDP (European Area)	0.94	0.64
Quarter=1	-0.07	0.02
Quarter=2	0.18	0.02
Quarter=3	0.34	0.02
Year=2006, 2007	0.06	0.02

Table 5.3: GDP growth and traffic growth at Dublin Airport

5.11 A strict application of the results might lead the Commission to conclude that US and UK GDP provides the best forecast for Dublin airport passenger numbers, since the other GDP numbers are statistically significant and have the expected positive sign. But there is a high correlation between trends in GDP for Ireland, the US, UK and the European Area for the most of the sample period (Q1 1997 to Q4 2008. This leads to 'collinearity' problems: it is difficult to identify separately the relationship between different countries' GDP and overall passenger traffic at Dublin airport. The Commission does not believe that it would be appropriate to base its forecast on US and UK GDP growth rather than Irish GDP, particularly when many forecasts are predicting these series to diverge more in the short run than has been the case in recent years.

5.12 Instead, the Commission has decided to retain its approach of just using Irish GDP trends to forecast passenger numbers at Dublin airport. Another option that the Commission considered but chose not to adopt was to make its forecasts including GDP forecasts for Ireland, the US, UK and European area. The Commission does not believe this would generate a forecast with which it could have any greater confidence, given the wide range of estimates for GDP growth in the coming years for all four economic areas. The available evidence for future Irish GDP growth presented later in this chapter illustrates the diverging opinions concerning just one economy.

Importance of prices

5.13 DACC and Ryanair called for the Commission to include a price-sensitivity component in the forecasting exercise. DACC provided its evidence from the UK of the sensitivity of demand to price at Stansted airport, and argued that the Commission should use the *InterVistas* price elasticity parameters when forecasting passenger numbers at Dublin airport.[11]

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[10] US real GDP data is from the Bureau of Economic Analysis at the US Department of Commerce. UK real GDP data is from the UK Office of National Statistics. Real GDP data for the European Area is from Eurostat. Irish real GDP data is from the CSO.

[11] Intervistas, *Estimating Air Travel Demand Elasticities,* www.iata.org, 2008.

5.14 The evidence that the Commission has looked at on the price sensitivity of demand at Dublin airport is inconclusive. Using the confidential airfare data that the airlines provided for meetings of the DAA-DACC forecasting working group, simple regressions yield estimates consistent with a relationship where price rises cause demand to fall but with an elasticity less than one. Demand responds to air fares, but not materially for small changes. However, these results have to be treated with caution since there are only 20 observations for prices, across the five-year period 2003-2007. The results are not replicated using survey data that the DAA has collected on average air fares paid by users at Dublin airport.

5.15 The next section outlines how the Commission has arrived at a final forecast for passenger numbers at Dublin airport. As discussed, the Commission has considered the possibility that large increases in charges for using Dublin airport, including the effects associated with the air travel tax, may have an appreciable effect on passenger demand at Dublin airport. It has not explicitly incorporated such a change. However, its forecasts are about one million less per annum than they might have been because the Commission has accepted representations from both the airlines and the DAA that passenger numbers in 2010 will be lower than implied by its GDP-based model.

Passenger forecast model used

5.16 The passenger forecast used in this Determination continues to assume an elasticity of one for Irish GDP. The figure below illustrates how the two series are closely correlated (the correlation coefficient is 0.92). Nevertheless, DACC, Ryanair and UPROAR all criticised the use of an elasticity of one. DACC and Ryanair argued that since 2001 the data do not support such a hypothesis.

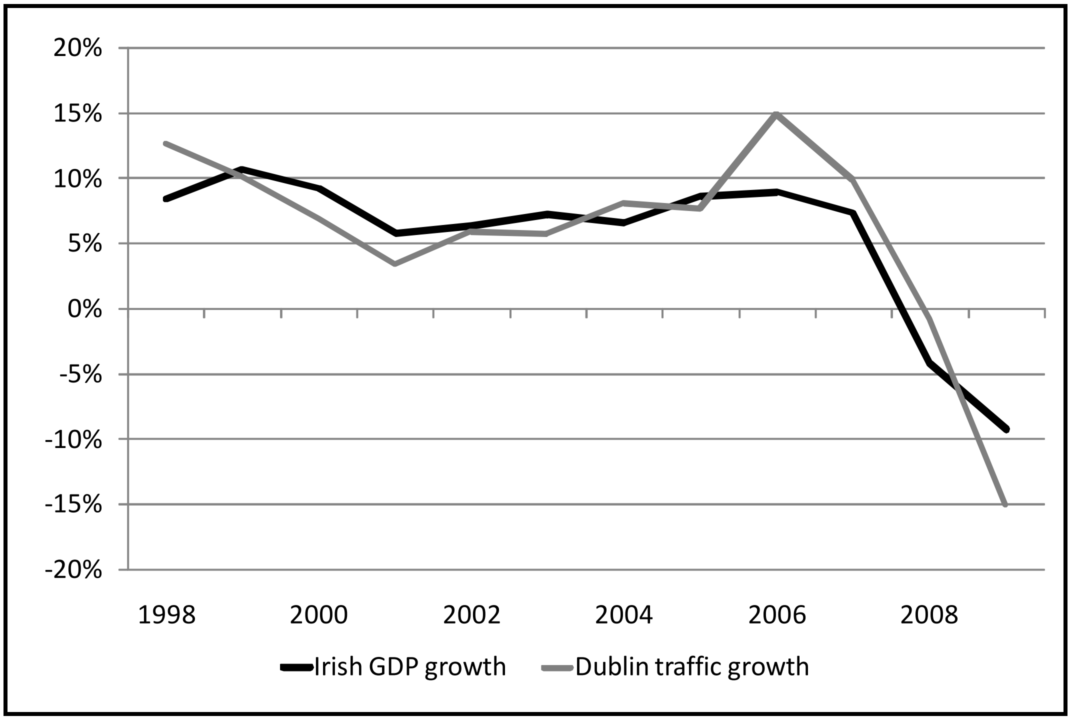

Figure 5.2: GDP growth and passenger growth at Dublin airport 1998 - 2009

Source: 2003-2009 data, Ryanair response to the draft determination; 1998 – 2002, CSO and Dublin airport passenger outturns.

5.17 The Commission accepts that in 2006 and 2007, passenger traffic at Dublin airport deviated from the long-run relationship that has otherwise been observed. In its modelling work, the Commission sought to control for this deviation by including a dummy variable for this period. Analysing the results from its models, the Commission cannot reject the null hypothesis that there is a one-for-one relationship between real Irish GDP growth and passenger traffic at Dublin airport. The table below shows the results from a regression of growth in passenger numbers against growth in GDP over the period 1990-2008. Because quarterly national accounting information is only available for Ireland from 1997 onwards, the analysis uses annual data.

Growth in passengers	Coefficient	Standard error
Constant	0.02	0.02
GDP growth	1.02	0.29
R-squared	0.43	
F (1, 17)	12.75	
Durbin-Watson	1.8	

Table 5.4: Relationship between growth in passenger numbers and growth in Irish GDP.

Source: GDP growth figures from the CSO

5.18 For the purposes of forecasting future passenger numbers, the Commission has had to form a view on future forecasts for Irish GDP. As it indicated it would in the draft determination, the Commission has revisited this question for the final Determination. The table below shows the most recent forecasts available from a range of different organisations. Since the draft determination, the consensus seems to have become more optimistic about the growth prospects for both the Irish and the global economies, in both the short and medium term.

GDP growth (%)	2009	2010	2011	2012	2013	2014
ESRI	-7.2	-1.1	3.5-5.6 p.a.			
Eurocontrol	-7.9	-1.0	3.0	3.0	3.4	3.5
Central Bank	-7.8	-2.3	n.a.			
OECD	-7.5	-2.4	n.a.			
IMF	-7.5	-2.5	n.a.			
EU	-7.5	-1.4	2.6			
IBEC	-7.5	-1.6	1.7	2.6	3.6	
Davy	-6.3	1.2	4.1			
DKM	-8.3	-2.0				
S&P	-8.1	-1.5				
CAR assumption		**-1.1**	**2.0**	**3.0**	**4.0**	**5.0**

Table 5.5: Projections for real GDP growth

Sources: ESRI – Quarterly Economic Commentary, Autumn 2009 (for 2009-10) and "Recovery Scenarios for Ireland", May 2009 (for 2011 -14); Eurocontrol – Medium Forecast September 2009; Central Bank – Quarterly Bulletin, October 2009; OECD – Economic Outlook November 2008; IMF – World Economic Outlook, October 2009; EU – DG Economic and Financial Affairs Autumn 2009 Forecast; IBEC – Economic Trends October 2009; Economist Intelligence Unit (EIU) – Country Data Ireland, May 2009; Davy – September 2009; DKM – Economy Watch September 2009, Average of forecasts from 15 Organisations, April – August 2009; S&P – European Economic Outlook September 2009.

5.19 The Commission has not revised its GDP growth forecasts since the draft determination. Several parties responding to the draft determination felt that the Commission had been too optimistic in its forecasts for GDP. The Commission has concluded that retaining this earlier forecast is an appropriate way to address the competing considerations of how to respond to a general upturn in sentiment concerning GDP prospects and the representations from a number of parties encouraging the Commission not to rely on an overly optimistic forecast of GDP.

5.20 In the short term the Commission continues to accept that actual evidence from the airport and users, based on airline schedules may help generate a superior forecast than relying just on GDP. The DAA has indicated that it expects traffic in 2009 to be between 20.0mppa and 20.5mppa, based on more recent traffic outturns, and anticipated airline schedules for the winter season. This is lower than the 21mppa that the Commission assumed for 2009 in its draft determination. For the Determination, the Commission has assumed passenger numbers in 2009 will be 20.5mppa. The figure below compares monthly passenger numbers in 2008 and 2009. Since May, the 2009 numbers have been lower than the corresponding month in 2008 by 14%. If this trend continues through to the end of the year, this will be consistent with an outturn of 20.5mppa.

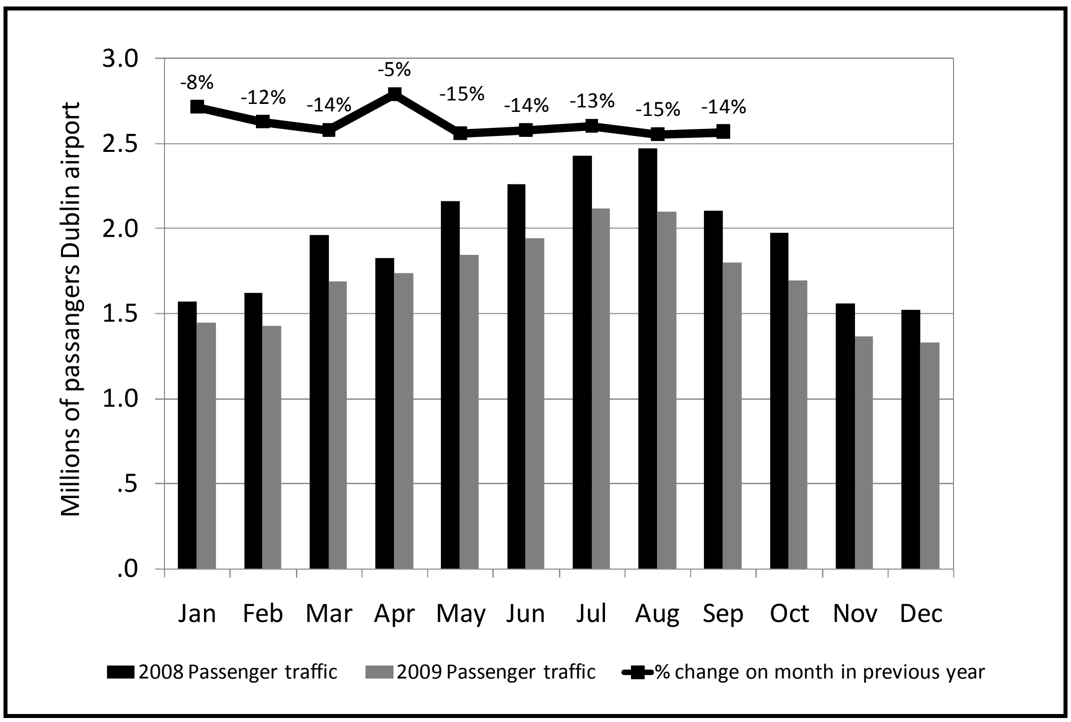

Figure 5.3: Monthly passenger growth Dublin airport, 2008 - 2009

Source: DAA, CAR projection Sep – Dec 2009

5.21 For 2010 both the DAA and the airlines (as represented by DACC) have indicated to the Commission that they expect passenger numbers in the range 18.5-19.5mppa. This contrasts with the predictions from a model assuming an elasticity of one for Irish GDP and 2009 passenger numbers of 20.5mppa. The Commission has made an adjustment to its model and used a forecast for 2010 of 19.5mppa. For the later years of the forecast, the Commission has relied on its model. Because forecasts for later years in the Commission's model depend on the forecast in the earlier years, the consequence of adopting a 2010 forecast more consistent with DAA and airline forecasts is to produce a five-year forecast that is consistently below what the Commission might otherwise have forecast. The discrepancy is about one million per annum.

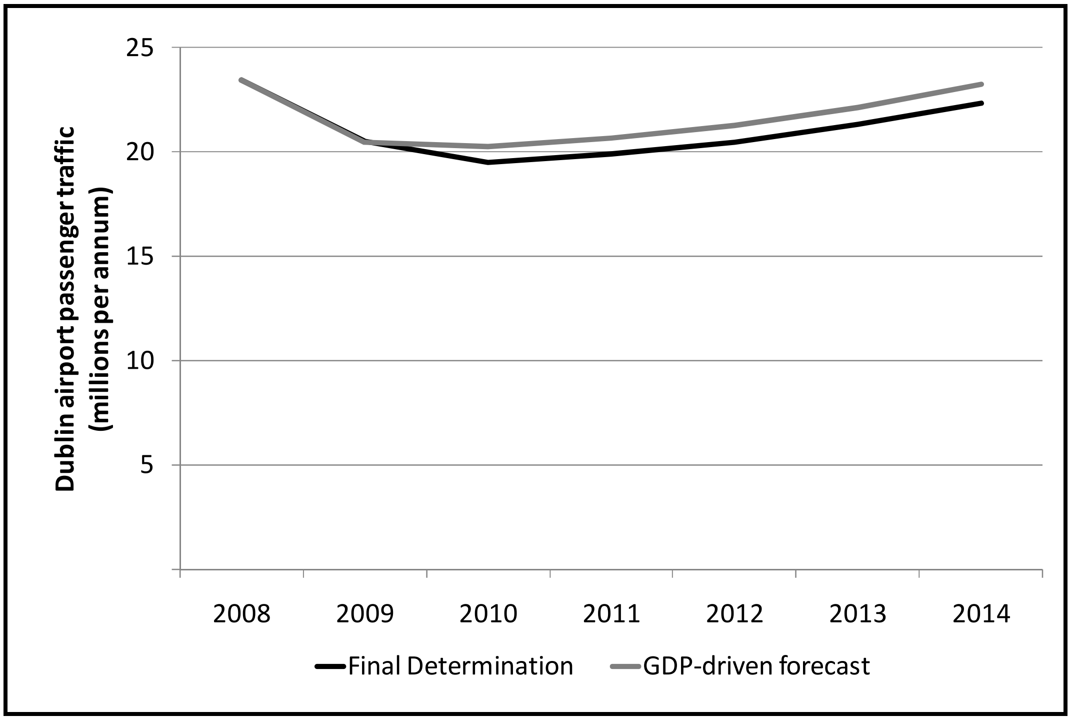

Figure 5.4: Dublin airport passenger forecast

5.22 In the issues paper, the Commission included a chart that illustrated how different components in the building blocks calculation affected the 2005 determination. The single biggest factor then was changes in forecast passenger numbers, with lower forecasts leading to a higher price cap all else equal. A similar effect is observed when moving from the passenger forecast used in the draft determination and the passenger forecast used in this Determination.

6. Operating Expenditure

6.1 This section presents the Commission's assessment of the DAA's opex needs at Dublin airport for the period 2010–14. The Commission has considered what represents an efficient level of opex to operate existing facilities, and also how those costs may change when the second terminal opens. Since the draft determination the two biggest changes that the Commission has made to its target level for opex are its change in forecast passenger numbers and incorporating the effects of T2 opening. The table below provides the Commission's forecast operating costs assuming T2 opens 1 November 2010, and that it subsequently serves 40% of total passenger numbers at the airport.

Opex	2010	2011	2012	2013	2014	Averages 2011-14
Total (€m)	198.0	205.3	207.8	210.4	213.4	209.2
Consisting of						
Existing facilities	173.0	175.1	177.3	179.9	183.1	178.9
Terminal 2	25.5	43.0	44.1	45.0	46.0	45.0
T1 offset	(0.5)	(12.8)	(13.5)	(14.4)	(15.7)	(14.1)
Passengers (m)	19.5	19.9	20.5	21.3	22.4	21.0
Per pax opex (€)	10.15	10.32	10.14	9.88	9.54	10.00

Table 6.1: Commission projection for opex 2010-2014

6.2 The following policy assumptions also apply:

- DAA can realise efficiencies relative to its 2008 operations of approximately 4% in real terms (about 10% in nominal terms);
- Payroll costs for staff engaged in activities in existing facilities will rise by no more than inflation from 2008 levels;
- Operating costs for T2 will average about €45m on a full-year basis from its opening to passenger traffic in Q4 2010, with additional set-up costs to be incurred in the six-months preceding its opening;
- There will be an off-setting reduction in T1 opex from the opening of T2 that averages €14m on a full-year basis; and
- No transitional costs associated with realising savings required because of identified inefficiencies, lower levels of demand, and the potential outsourcing of operations in T2.

6.3 Work commissioned from two sets of consultants has informed the Commission's final proposal on opex needs. Indecon-Jacobs conducted a bottom-up efficiency study of existing facilities at Dublin Airport, including DAA Group head office costs. Booz & Co looked at the effect on opex of T2 becoming operationally ready. The Commission has carefully considered all representations to its proposals in the draft determination, including those relating to the report of Indecon-Jacobs published at the time of the draft determination. The work by Booz & Co was commissioned after the draft determination, but parties were given an opportunity to comment on the findings before the Commission made this Determination. In finalising its conclusions, the Commission sought feedback from Indecon-Jacobs and Booz & Co on whether they thought that any of the comments relating to their work justified a material change to the conclusions that they had reached.

6.4 The Indecon-Jacobs' bottom-up study looked at the efficiency of the various individual components of the DAA's existing operations at Dublin airport to form a view on what a reasonable level of overall operating costs might be. The Commission chose to commission such a study based on stakeholder responses to the October 2008 airport charges issues paper.

6.5 Indecon-Jacobs expressed their conclusions in terms of a conservative and an ambitious case. The Commission has taken the midpoint of these for the purposes of arriving at an opex estimate. This equates to a reduction of 106 full-time equivalents (FTEs) at Dublin airport from 1800 in 2008 and 50 in DAA group head office from 225 in 2008. The Commission has also assumed that FTEs in passenger-driven FTE categories respond to changes in passenger numbers relative to 2008 levels according to the drivers assumed at the time of the draft determination.

6.6 The Booz study sought to forecast operating costs at the new passenger terminal and to identify any economies of scale and scope that may arise from the introduction of a new passenger terminal. Booz's forecast of T2 operating costs was based on an 'efficient operator' providing all of T2 services and accordingly was not based on existing DAA per-FTE costs. It forecast, on a full-year basis from 2011-2014, average opex of €45m. Booz estimated an off-setting annual cost saving in existing facilities of about €14m per annum, an estimate derived using existing DAA per-FTE costs.

Proposals in the draft determination

6.7 Due to uncertainty regarding the tender process for the operations of T2 the draft determination did not include a forecast for T2 opex. Instead the draft determination set out the Commission's thinking at the time on how it would treat, respectively, the costs of the operations that would be covered and not covered by the Government's tender for an operator of certain services at terminal 2. This is discussed further in the discussion on T2 opex below.

6.8 In relation to existing facilities at Dublin Airport the Commission's draft determination proposed an operating cost forecast which assumed that T1 would continue to service all of the passenger demand at the airport for the lifetime of the Determination. However recognising that T2 was likely to commence passenger operations at some point during this period, the Commission proposed to reduce the T1 opex forecast to account for the reduced passenger throughput in T1 once T2 operations commence. This is discussed in greater detail under "T1 offset" below.

6.9 Having conducted a bottom-up study of operating processes at Dublin Airport and identified areas where scope for efficiencies existed, Indecon-Jacobs proposed a range of possible savings relative to 2008 of 106-206

FTEs at both Dublin Airport and the DAA Group head office. It also recommended that reductions within this range could be achieved by the end of the new regulatory period though natural wastage. In its draft determination the Commission proposed that DAA could achieve a level of FTE reductions in the middle of the Indecon-Jacobs range by end-2012, phasing the efficiencies into the Commission's cost model evenly over the first three years of the regulatory period.

6.10 The Commission also assumed that the average per FTE payroll costs for each FTE category would stay constant in real terms from 2008 levels, essentially allowing only pay increases in line with CPI measured inflation to be recovered through airport charges for each year in the regulatory period.

6.11 In addition to the reduction in FTEs through efficiency assumptions relative to 2008, the Commission's forecast in the draft determination linked FTE growth to forecast passenger growth, relative to 2008 levels, for each year during the regulatory period. In addition, changes in passenger numbers were assumed to have a second-order effect on certain other costs (e.g. overheads) which were assumed to change in line with changes in FTEs. One non payroll cost category – aviation customer support – was assumed to vary with passengers.

Category	2009 Elasticity
Security staff (APFS)	1.00
Terminal staff	0.60
Retail staff	0.30
Aviation customer support	0.95

Table 6.2: Elasticity assumed in draft determination for staffing numbers to passenger levels

Source:Indecon/Jacobs

6.12 For non-payroll opex, the Commission made a forecast consistent with the advice of Indecon-Jacobs, other than for an adjustment to energy costs to account for incremental efficiencies assumed from a proposed investment in a new combined heat and power plant ("CHP").

Representations by interested parties

6.13 The Commission received representations on the opex proposals in its draft determination from Aer Lingus, the DAA, DACC, Irish Hotels Federation (IHF), Ryanair and SIPTU. Most of the representations related to the Commission's proposals on the number and phasing of FTE reductions and its proposals on pay. We consider these points below.

6.14 A number of parties also commented on the Indecon-Jacobs study, critiquing its methodology or how the Commission had chosen to interpret the findings of the report. Indecon-Jacobs has had the opportunity to consider all these comments and to incorporate them into its final report where necessary. Indecon-Jacobs and the Commission are satisfied with the overall approach and methodology. The study was rigorous and the level of engagement with the industry sufficient for the purposes of reaching its conclusions – by publishing a draft report, all parties have had an opportunity to provide feedback before final conclusions were reached. Other than a revised estimate of energy costs, Indecon-Jacobs did not consider that the representations required a material change to its findings. Its final report is attached as a separate appendix to this report.

Assumptions regarding efficiency savings

6.15 Indecon-Jacobs' work compared DAA data with process-level data from other airports. Its final report addresses comments received concerning the choice and use of comparator airports. DACC also questioned the choice of comparator airports on the basis that they appeared to be mainly European hub airports operating in regulated environments. The Commission is satisfied that the work reflects evidence from a range of airports, including some that are not hubs and are not subject to price-cap regulation.

6.16 The Indecon-Jacobs' report also includes some top-down analysis of a number of operating cost and efficiency metrics comparisons with other airports based on publicly available information. Measures reported included passengers per employee and total and unit cost.

6.17 Several parties commented on how the Commission should treat the top-down results and their relationship with the findings from the bottom-up analysis. The DAA viewed its operating costs per passenger reported in the top-down analysis as proof of its efficiency in 2008. In contrast, DACC and Ryanair identified DAA's position in tables comparing passengers per employee and staff costs per passenger as demonstrating inefficiency. In responding to these representations from DACC and Ryanair, the DAA argued that its relatively high level of insourcing meant that it was to be expected that the DAA would perform poorly on these two metrics compared to airports that out-sourced more functions. The Commission accepts the DAA's argument that it is important to consider the share of outsourced labour before drawing conclusions from cross-sectional data on passengers per employee or staff costs per passenger.

6.18 The Commission's decision to commission a bottom-up study of airport costs, as opposed to performing a top-down analysis using macroeconomic indicators of partial and total factor productivity, was driven by the views of respondents to the Commission's October 2008 issues paper. That paper discussed various approaches that might be undertaken, including more top-down approaches, and outlined some of the merits of the different approaches. Parties responding to that paper supported a bottom-up analysis.

6.19 Different approaches to assessing efficiency may lead to apparently conflicting views. The Commission accepts that there is scope for reasonable people to disagree on what evidence to look at and how to interpret different pieces of evidence that may, in some instances, appear to be contradictory. It does not reject the DAA's view that some of the top-down metrics used by Indecon-Jacobs indicate that the DAA appears relatively efficient against the comparators used, nor does it reject DACC's proposition that the use of other comparators point to a different conclusion.

6.20 Even if the Commission were to accept DAA's proposition that it is efficient on a top-down basis, this would not necessarily imply that it is operating to best practice in all of its operations. One would expect firms in competitive markets to strive to improve any of their operations where they lagged behind their competitors, while also seeking to improve those where they are currently best in class. The Commission has assumed efficiencies can be achieved in certain operating categories, cleaning for example, to catch-up with the frontier for those activities. In other categories, the Commission has not assumed any efficiency savings, although it hopes that the normal incentives associated with price-cap regulation will encourage the DAA to realise efficiencies in areas such as security where the DAA currently appears to be relatively efficient.

6.21 Both DACC and Ryanair commented on the decision to use 2008 as the basis for the Commission's analysis. DACC argue that the Commission's assumed efficiency target in its 2005 determination of 1.8% per annum over the current regulatory period has not been achieved. Consequently, DACC argued that operations in 2008 were inefficient and therefore not suitable as a base year for the purposes of assessing efficient opex in future years. Ryanair makes a similar point in its representations to the Commission.

6.22 The Commission does not accept that using the 2008 data was inappropriate and rewards past inefficiencies. First, both DACC and Ryanair appear to place more weight on a 2005 forecast of efficient opex levels in 2008 than actual opex data in 2008 for the purposes of making future forecasts. The Commission thinks it is appropriate to consider new information since 2005, including out-turn opex in 2008, when considering future opex needs at the airport. Second, any comparison between 2005 forecast opex and out-turn opex needs to adjust for the fact that out-turn passengers numbers exceeded those forecast in 2005. This will affect both per passenger and overall opex.

6.23 Finally, and perhaps most importantly, the Commission does not believe that the choice of year has to correspond to a year in which the DAA was efficient. If the DAA were relatively efficient in the reference year, then a bottom-up assessment will identify less scope for efficiencies than if it were relatively inefficient in the reference year. In other words, the greater the inefficiency in the reference year the greater the assumed efficiencies in the next regulatory period, relative to that year. Therefore any additional inefficiency in the reference year will be captured by findings of the bottom-up study.

6.24 Ryanair observed that forecast opex per passenger in 2010 exceeds that of the 2008 reference year. This arises primarily through a collapse in traffic at Dublin Airport and the relatively high level of fixed operating costs. Total opex is forecast at a lower level in 2010 than 2008, with staff costs forecast to fall by a greater amount than the forecast increase in non-staff costs driven by increases in exogenous costs such as rates and insurance. The 17% forecast decrease in traffic is the primary reason for the forecast increase in opex per passenger.

Efficiency assumptions

6.25 One of the key issues raised in the responses to the draft determination related to the range of efficiencies proposed by Indecon-Jacobs, and which point to chose in this range, and time period over which the Commission should assume that the efficiencies should be realised.

6.26 The range of efficiencies proposed by Indecon-Jacobs together with the Commission's proposed efficiencies and DAA's staffing level in 2008 are expressed below. The draft determination proposed to phase the efficiencies in evenly over the years 2010-2012.

	Actual FTEs	**Proposed reduction in FTE numbers (before scale effects)**		
FTE category	**DAA 2008**	**Indecon-Jacobs Low**	**Indecon-Jacobs High**	**Commission proposals**
Dublin Airport				
Terminals, Maintenance and Cleaning	677	46	87	66
Police, Fire and Security	668	0	0	0
Airport Management and Commercial	98	5	12	9
Retail	241	15	27	21
Other	116	10	10	10
Total	**1800**	**76**	**136**	**106**
DAA Head Office	**225**	**30**	**70**	**50**

Table 6.3: Number of FTEs 2008 and Commission proposals 2010-14

Subject to rounding

6.27 In its response to the draft determination Ryanair stated that the target efficiency level should be the upper bound of the Indecon-Jacobs range, a view also expressed by DACC in its submission on the basis that DAA should be incentivised to make greater use of out-sourcing. Both parties also sought for the Commission to have regard to the DAA's own cost-savings plan. Despite criticisms of the Indecon-Jacobs report, DAA's comments on the Commission's proposals in the draft determination related mostly to pay and the assumed time period within which the efficiencies ought to be achieved. In contrast, the IHF's representation proposed that all efficiencies be assumed in 2010. This report considers the issue of possible phasing of efficiency savings later in this chapter.

6.28 Since the draft determination, the Commission has met with the DAA to learn more about the DAA's own cost-saving plans. These plans have not caused the Commission to alter its approach to forecasting future opex levels at the airport. The plans presented to the Commission would not justify assuming greater scope for efficiency savings than identified by Indecon-Jacobs.

6.29 The Commission has continued to adopt an opex forecast that uses a midpoint of the Indecon-Jacobs range as a suitable estimate of what an efficient level of operating costs would have been in 2008. It believes that this is a reasonable approach, consistent with its statutory objective. The Commission has based its determination on an opex forecast that is challenging, protecting current and prospective users from higher costs, but not at the upper bound of possible forecasts, enabling the DAA to operate the airport in a sustainable and financially viable even if it is unable to achieve the most ambitious efficiency savings.

Per FTE costs

6.30 In its draft determination the Commission proposed to cap per FTE pay in real terms at the 2008 average for each FTE category – essentially only allowing pay increases in line with CPI-measured inflation during the next regulatory period.

6.31 A number of representations were received from parties on this issue. DACC and Ryanair supported the Commission's proposals, whereas the DAA sought for the Commission to allow its forecast payroll inflation. The DAA's forecast payroll inflation assumed significant real wage growth. In contrast, the Commission's choice of 2008 implied a nominal decrease in payroll costs given the deflation that Ireland has experienced in 2009.

6.32 The Determination assumes nominal per-FTE costs correspond to their level in 2008 and will stay constant for the duration of the Determination. The Commission accepts that existing contractual commitments may constrain the ability of the DAA to achieve nominal pay cuts. Given there was deflation of about 6% in the past year, the Commission's use of 2008 nominal per-FTE costs implies an increase in real per-FTE costs since then.

6.33 The Commission has also considered whether to accept the DAA's representation and assume increasing real wages for the duration of the Determination.

6.34 The DAA claimed that the Commission's position on real wages is inconsistent with its GDP forecast in the draft determination. The Commission rejects this representation. The forecast the Commission has used for GDP growth suggests that Irish GDP will not return to 2008 levels until 2014 – if the starting point was 2008 real wages, a possible implication of the DAA's position is that the draft determination assumed real wages that were too high for almost the entire duration of the determination. Furthermore, the DAA's claim that GDP growth determines pay contrasts with a recent paper by the Central Bank, which indicates that it may by inflation or inflationary expectations that determine payroll inflation.[12]

6.35 To support its claim for increasing real wages, the DAA also cited an ECB working paper on OECD economies which suggests that although most economies have pro-cyclical wages, those countries with more open economies and strong unions tend to be less pro-cyclical.

[12] Mary Keeney, Martina Lawless and Alan Murphy, "Wage setting and wage flexibility in Ireland: results from a firm-level study", *Central Bank Quarterly Bulletin,*4, October 2009

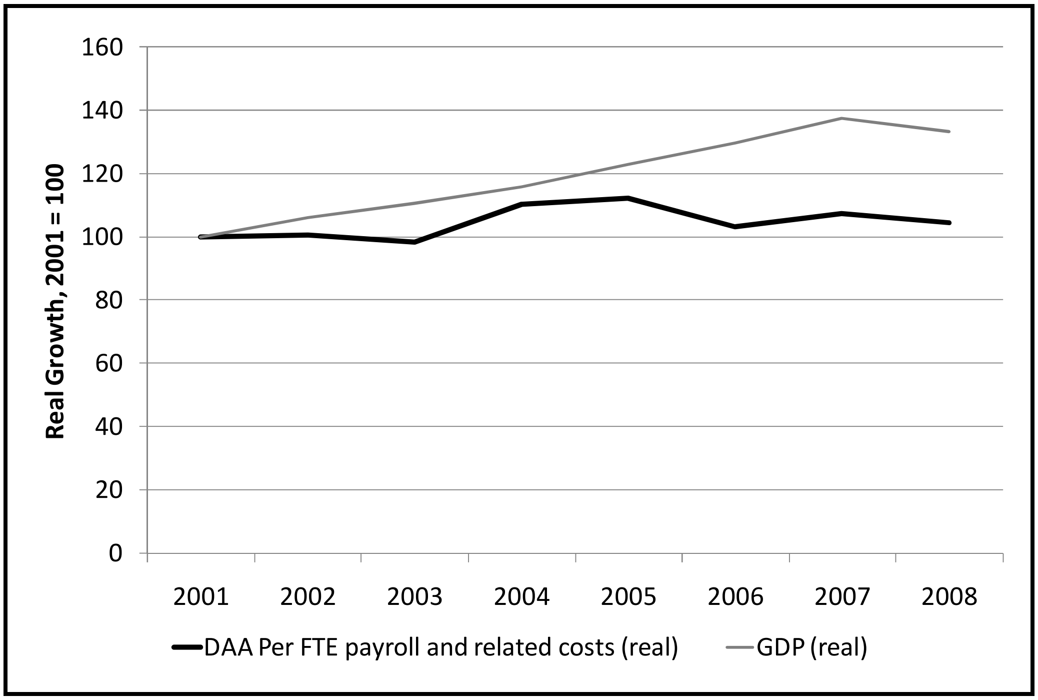

Figure 6.1: Growth in DAA per FTE payroll and related costs *versus* GDP (all data real)

Source: CSO

6.36 The DAA also argued that the presence of large fixed costs and a unionised workforce adversely affect its ability to be flexible with regard to payroll costs. The DAA provided the Commission with per-FTE payroll costs for 2009 which show nominal pay rises in a year in which inflation (as measured by changes in the CPI) was minus 6%. The Commission is sympathetic to the idea that there may be limits to how quickly per-FTE costs can adjust in the short term. At the same time, it would not be consistent with evidence on wage trends or wage-setting practices in the economy as a whole to simply read-in the nominal pay increases for 2009 that are observed for the DAA. The Commission believes that it would be failing to protect the interests of current and prospective users if it were to do this.

6.37 The Commission rejects the idea that it should make an allowance for operating costs that assumes further real pay increases without corresponding productivity gains. It does not believe it would be protecting the interests of current and prospective users if it allowed higher charges because the DAA found it challenging to control real payroll costs. Such challenges face firms in many other sectors of the economy, many subject to greater competitive constraints. Economic regulation seeks to impose the same sorts of disciplines on a firm to manage its costs that a firm subject to competition might face.

6.38 In reaching its conclusion, the Commission has looked at other forecasts of pay rates in the Irish economy. Both the Economic and Social Research Institute (ESRI) and IBEC have published information on payroll inflation on a quarterly basis this year. In its most recent *Economic Commentaries*, the ESRI forecast economy-wide reductions in pay of 3% and 1% in the second and third quarters of 2009 respectively. It currently forecasts payroll costs to fall by 2.5% in 2010.[13] The evidence from IBEC also suggests that there is currently downward pressure on wages in Ireland. Although not an economy-wide survey, IBEC's quarterly business sentiment surveys provide some information on pay trends amongst IBEC's members. In each of its three surveys to date in 2009, IBEC has consistently reported a high incidence of pay freezes or cuts. In its Q3 survey 81% of respondents reported either a pay freeze (59%) or a pay cut (21%) in the year to date. The results for the three surveys are reported below.

Actions reported quarterly surveys	Q1	Q2	Q3
Pay freeze	64%	57%	57%
Pay cut	20%	10%	30%

Table 6.4: IBEC survey on pay trends

Source:IBEC

Q1 represents expected actions in following three month, Q2 and Q3 represent actual actions taken in 2009

6.39 The Commission also notes that the DAA's existing per-FTE payroll costs are already high relative to what Booz advise an independent operator might be expected to pay. This comparison is also a reason why the Commission has not accepted SIPTU's argument that quality of service at the airport might suffer if the determination does not make a sufficient allowance to afford to retain the most experienced staff. Payroll levels already appear sufficient to attract and retain a workforce capable of delivering a suitable quality of service.

6.40 SIPTU also expressed concern that the draft determination did not have regard to the costs to the DAA of funding pension liabilities. Since SIPTU's representation, conditions in the financial markets have improved which should have reduced any pension deficits. There are other reasons why the Commission has concluded that this representation does not warrant a change in its approach from the draft determination. The payroll data include all labour costs, including pension contributions. The DAA has not indicated that it requires a more generous allowance for payroll costs because of pension liabilities. The Commission has previously queried whether it should automatically be users, rather than either workers or shareholders, who bear all the risks associated with changes in the costs of pension liabilities.

6.41 Given the available evidence, the Commission has decided not to assume real-wage increases over the coming regulatory period.

[13] See page 38, ESRI, *Quarterly Economic Commentary*, Autumn 2009.

Non-payroll costs

6.42 For non-payroll costs, the draft determination included a forecast that was broadly consistent with those suggested by its consultants' Indecon-Jacobs. Based on the representations received, the Commission has made some changes.

6.43 The most significant change relates to energy costs. The Commission and Indecon-Jacobs have both engaged with the DAA to understand better the basis for its forecast. To reach a revised, final forecast for energy costs, Indecon-Jacobs used market data of forward energy prices. The Commission's draft determination included an offset for energy costs of €0.5m for the years 2012, 2013 and 2014 to reflect incremental cost savings associated with DAA's investment in a new combined heat and power plant ("CHP"). In its response to the draft determination DAA provided evidence that the new investment would replace another CHP which is due to be decommissioned. To that extent the investment would protect rather than add to existing efficiencies. The Commission has accepted this representation and not assumed incremental savings from the CHP in its final assumptions for energy costs. The Commission has applied a €0.1m offset to Indecon-Jacobs' estimate for all five years of the forthcoming Determination to account for the closure of the TBG and Area 14. Booz & Co, when looking at how T2's opening might affect opex costs in T1, identified the closure of the TBG and Area 14 as reducing energy costs by about this amount. Since these changes have already occurred, in advance of T2 opening, the savings relative to 2008 energy costs should be realised in all five years of the Determination.

6.44 Other changes from the draft determination relate to the use of drivers for other overheads and car-park overheads. The Commission has assumed that car-park overheads depend on passenger numbers rather than FTEs, following a representation from the DAA. For other overheads, the Commission has excluded PRM costs from this category since it accepts that PRM costs may not grow in line with FTEs. For PRM costs the Commission has looked at data for a full-year estimate (2009) and on that basis made a forecast for the next five years. Finally the Commission has used the most recent data available for head office non-payroll costs as the basis for forecasting these costs forward; these more recent data have prompted the Commission to revise down its forecasts for this category by €1m per annum.

Effect of T2 opening

6.45 The draft determination did not explicitly set out what the level of costs it expected to allow once T2 opened. Instead, the Commission indicated that it intended to rely on the outcome of the tender process the Department of Transport was conducting to select an operator for certain services in T2. For those services covered by the tender, the Commission proposed to allow the DAA to recover the costs that the DAA had to pay to the contractor net of any payments the contractor might make to the DAA. For non-tendered services, the Commission proposed to make an allowance based on its own forecasts for what a reasonable level of costs might be for such operations. In the absence of any published list setting out exactly what would be included in the Department's tender, the

Commission was not in a position to estimate what these non-tendered costs might be at the time of the draft determination. The Commission also proposed to adjust its T1 operating cost forecast to be consistent with any reduced volumes that might use the facility after T2 was operationally ready. Finally, the Commission proposed to allow reasonably incurred transitional costs, including possible redundancy costs, associated with T2 opening.

6.46 Aer Lingus, the DAA, DACC, Ryanair and the consortium advising the Department of Transport all responded to this aspect of the draft determination. The DAA and the consortium both welcomed the proposed approach, although the DAA wanted the costs of non-tendered services, contract facilitation costs and any T1 cost reductions to be included in the Determination and not left unspecified. The consortium requested that the Commission not publish the winning bid for the tendered services.

6.47 The airlines disagreed with the proposed approach. DACC stated that it would not be acceptable to pass through the tendered costs automatically since the DAA had been involved in designing and specifying the tender process and would also be a bidder. It argued that the Commission should either set a definitive cap in its Determination which covered all the associated costs with T2 opening or else re-open the Determination in full once T2-opex costs were known. Ryanair claimed that the Commission’s proposal would not meet the reasonable needs of users as the DAA had distorted the tender by over-specifying T2 and participating in the process as a bidder. Aer Lingus was concerned that an open-ended commitment to pass-through additional costs failed to protect users.

6.48 DACC also argued that T2 costs should only be included if passenger numbers exceeded 25 mppa or a new runway was delivered. Aer Lingus suggested that the Commission should only allow efficient benchmarked costs consistent with a terminal size specified by the Commission’s consultants (Rogerson Reddan & Vector) during the 2007 interim review. Ryanair argued that T2 should be mothballed until annual traffic exceeds 30 mppa if overall opex were to rise by including T2 opex in the price cap. It also argued that T1 users should not have to pay for T2 opex as to do so would be inconsistent with a “user pays principle”.

6.49 In terms of the level of costs that might be reasonable to assume, DACC referred to the experience at Manchester airport when it opened a new terminal. DACC suggested that this implied that a 10% increase in the overall operating cost budget would be a reasonable allowance for Dublin airport once it started operating a new terminal.

6.50 Based on the representations received and the latest available information concerning the tender process being run by the Department, the Commission concluded it would have to forecast the impact opening T2 would have on opex costs for the DAA and incorporate such a forecast into its Determination. The consortium’s representation left open the possibility that the Commission would not be in a position to make a determination that passed through the costs of the tendered services while still being transparent, if the Commission was unable to specify the upward adjustment to the cap it was allowing to compensate for the costs of the winning bidder. The Commission also accepted that users, some of whom in other instances have promoted competition as a means of realising efficient outcomes, did not in this instance believe it was appropriate for the Commission to rely on the tender process to arrive at an efficient level of costs.

6.51 The Commission appointed Booz & Co to assist it in forecasting the opex implications of T2 becoming operationally ready. Booz made a number of policy assumptions to develop their forecast.[14] These assumptions were agreed with the Commission. Perhaps the most important concerned what mix of traffic to assume between the two terminals. The analysis ultimately assumed a 60/40 split between T1 and T2. The Commission adopted this policy after asking Booz to advise it qualitatively on what the cost implications might be under a number of alternative scenarios, including "mothballing" T2 and assuming a 100/0 split between the two terminals. On the basis of this analysis, the Commission concluded that Booz should proceed to develop estimates on the basis of a 60/40 split. Subsequent to this, the Commission received the 2009 Direction, which included a reference to government policy concerning the need for the second terminal's development to conclude as soon as possible. The Commission concluded that the interests of current and prospective users were best protected by making an opex allowance consistent with the costs the DAA is likely to incur if T2 serves 40% of forecast traffic after it becomes operationally ready.

Comments on the Booz & Co report

6.52 A report by Booz & Co was published in mid November, affording parties two weeks in which to provide comments. In making this Determination, the Commission's final conclusions concerning an appropriate allowance for operating costs after T2 is operationally ready have considered these responses from Chambers Ireland, the DAA, DACC, Ryanair and Forfás. Booz considered all responses, in so far as they referred to Booz's analysis, and identified two areas where material changes to its conclusions were warranted. These related to the level of rates and energy costs for T2 that Booz had assumed. The Commission's Determination has been calculated with reference to the revised forecast by Booz. The final report from Booz is attached as a separate appendix to this report. It includes comments on various parties' responses to the draft.

6.53 Chambers Ireland's submission did not directly speak to either Booz's report or opex and instead commented on capital investments and new infrastructure at Dublin Airport. In relation to T2 it stated that aeronautical charges should make a significant contribution towards the provision of airport infrastructure and reiterated its earlier comments in its representation to the draft determination regarding the need to ensure value for money in return for capital investment. It added that any charging regime must recognise the costs of previous investments while facilitating future investments.

6.54 Forfás' response focused only on the operating scenarios annex to Booz report and recognised that while it is necessary to explore all options when committing to expenditure it supported the complete opening of T2, a

[14] See pages 23 and 24 of the Booz report for a full list of assumptions

position which it stated IDA Ireland fully supported. Forfás stated that "the mothballing of an impressive piece of infrastructure such as Terminal 2 will tarnish investors' impressions of Ireland".

6.55 Ryanair's submission endorsed those of DACC, considered below.

6.56 The DAA and DACC made specific comments on Booz's findings. Some concerned the costs that Booz had assumed in its bottom-up report and have been considered in Booz's final report.

6.57 Other comments from the DAA and DACC related to how the Commission might use the findings from Booz's work for the purposes of making the final Determination, including comments on policy assumptions that had guided Booz's analysis, such as T2's size and passenger throughput.

6.58 The DAA called for the Commission to follow the approach described in the draft determination and to pass through the costs of the winning bidder when they become known.[15] In the interim, the DAA proposed using a 'credible indicator' of T2 opex in the Determination which would later be replaced by the actual costs of the tendered services when the outcome is fully known. It suggested that its own forecast of T2 opex rather than Booz's should be used as the credible indicator.

6.59 For the reasons outlined above, the Commission has concluded that this Determination should not rely on the outcome of the any tender process to select an operator for T2. It also rejects the suggestion that it should use the DAA's forecast for T2 opex rather than Booz's forecast. The DAA forecast has not been published and scrutinised by interested parties, unlike the Booz report.

6.60 Both the DAA and DACC made representations as to the passenger throughput that should be assumed for T2 in the Determination. A 60/40 split between T1 and T2 reflects the most recent expectation of airlines customers at each terminal. The Commission is satisfied that this is a reasonable assumption for the purposes of estimating the likely cost implications of having passengers use two terminals at the airport.

6.61 DACC's response started from the position that there is sufficient capacity in T1 to cater for 2010-2014 airport-wide demand and that T2 costs should not be recovered. The Commission has rejected this representation. In not assuming that T2 should be mothballed, the Commission has had regard to the representations of Forfás and Chambers Ireland, as well as Government policy. Further, the evidence available to the Commission suggests that there would be significant costs associated with not opening T2. An annex to Booz's report outlines the possible costs that might arise under alternative 'mothballing' scenarios; the Commission has not received any responses that suggest it is wrong to conclude such scenarios would themselves entail significant costs. Since the Commission previously approved an allowance for T2, the Commission believes it would not have adequate regard to its statutory objectives if it disallowed costs that the DAA incurs given the facility is in place. The efficient and economic

[15] DAA stated in its response to Booz's report that it would not be a bidder in the Government's tender process but rather that the best third party bidder would be benchmarked against DAA.

development of the airport could be jeopardised if the Commission prevented the DAA from recovering the costs associated with investments the Commission has previously allowed, including consequential opex costs.

6.62 In relation to the outputs of Booz's analysis, Booz accepted the DAA's contention that it had underestimated the costs relating to rates for T2 retail and forecast energy price rises.

6.63 DACC proposed that the Commission should disallow as much as €20m of opex identified by Booz. Of this amount, about two thirds (€13.7m) related to the findings of Booz. Having considered DACC's representation, Booz did not believe that any of these possible cost reductions identified by DACC warranted a change in the conclusions it reached.

6.64 DACC also called for a further €6.3m be disallowed due to DACC's view that T2 is over-sized by "at least 50%". These costs relate to cleaning, rates and other utilities typically determined by the area of a building's floor space. These all represent costs and liabilities that the DAA will have to incur. The Commission does not believe it could satisfy its statutory objectives and have regard to all its statutory factors if it ignored such costs. The Commission has previously sought to protect the interests of users and encourage the efficient and economic development of Dublin airport by introducing a 'two-box approach' for remunerating the investment costs associated with building T2. The DAA bears the risks of not recovering about €100m should demand not warrant the size of the facility built. To disallow further costs would, in this instance, appear to be a disproportionate regulatory response that would threaten the ability of a company to operate Dublin airport in a sustainable and financially viable manner.

T2 opex costs

6.65 Booz analysed the operating costs for T2 using the standard of an efficient operator. The analysis did not depend on the DAA's existing or forecast costs, or terms and conditions of employment. For pay rates, Booz used benchmark data to determine suitable pay rates in T2. These tend to be lower than equivalent pay rates at Dublin airport in the existing facilities, by between 15% and 33%. Some of this difference may be attributable to a different mix of workers in the two facilities – consistent with this assumption, the Commission notes that Booz suggested that payroll costs per FTE in T1 may increase after T2 opens because the FTEs no longer required in T1 will be disproportionately among the lower paid in those categories. The Commission has adopted Booz's estimates for T2 FTEs, and assumed no increases in real payroll costs for the duration of the Determination.

6.66 The number of FTEs required was developed from a bottom-up assessment, on a process-by-process basis. It was based on the traffic forecast used in the draft determination. The Commission has accepted the general conclusions Booz reached concerning the required number of FTEs once T2 is operationally ready, but adjusted the numbers to reflect the revised passenger forecast used in this Determination.

6.67 There were also a number of costs associated with achieving operational readiness in the new terminal. The DAA identified seven such activities. Booz suggested that 'facilities readiness' and 'process readiness' were more appropriately viewed as capital expenditure ("capex") associated with making the infrastructure ready. However, Booz did accept that the remaining activities were typically regarded as opex and should not be considered as part of any T2 capex allowance. These opex costs would fall in the six months prior to T2 opening, so Booz's estimates assume they occur in the period April-November 2010.

6.68 The table below shows Booz & Co's five-year forecast for T2 opex, including payroll and non-payroll costs.

T2 Opex	2010	2011	2012	2013	2014
T2 opex (€m)	25.5	43.0	44.1	45.0	46.0
Passengers (millions per annum)	19.5	19.9	20.5	21.3	22.4
Per passenger T2 opex cost (€)	1.31	2.16	2.15	2.11	2.05

Table 6.5: T2 operating costs

Source: Booz & Co and CAR

6.69 In the interim review the Commission indicated that should T2 not be operationally ready by the end of 2009 (as required under the Aviation Action plan), the Commission would protect users from having to pay higher charges to fund T2-associated costs. Consistent with these proposals, the Commission has concluded that T2 opex costs incurred prior to it opening should be recovered after the facility opens. It has capitalised the costs. The Commission considered capitalising the costs over the assumed asset life for T2 (40 years), but concluded that this would be inconsistent with its statutory objective to enable the DAA to operate the airport in a sustainable and financially viable manner. Consequently, it has capitalised the costs over four years. As discussed in chapter nine, this adversely affects the reported forecast financial metrics in 2010, a year in which those metrics are already forecast to be weak.

T1 offset

6.70 To estimate the effect on T1 opex costs of T2 opening, Booz & Co took as a starting point the Commission's opex assumptions at the time of the draft determination. It assessed how removing 40% of passenger numbers from the facility might affect opex in 2010 and 2011. For later years, Booz & Co also considered what relationship with passenger numbers to assume for different aspects of operations, i.e. it re-assessed the appropriate elasticity drivers to assume given a much lower level of passengers in T1 than Indecon-Jacobs had identified when they advised on the appropriate elasticities to assume given no new terminal opening.

6.71 The table below shows the assumed level of costs for existing facilities, assuming T2 opens in November 2010 and assuming that any efficiency savings can be achieved immediately.

	2010	2011	2012	2013	2014
T1 opex after T2 opens (€m)	172.5	162.3	163.8	165.5	167.4
Passengers (mppa)	19.5	19.9	20.5	21.3	22.4
Per passenger opex cost (€)	8.84	8.16	7.99	7.77	7.48

Table 6.6: T1 operating costs, assuming T2 opens November 2010

Source: Booz & Co and CAR

6.72 Payroll cost savings arise in terminals, security, maintenance, cleaning, management, and retail activities at Dublin airport. The Commission has assumed that T1 FTE requirements are down about 200 per annum after T2 opens. These changes arise because of a significant one-off reduction in passenger throughput and subsequent changes in the assumed elasticities relating passenger numbers and FTE requirements after this large change in the assumed number of passengers in T1.

Timing of efficiency savings

6.73 Between 2008 and 2011 the Commission has identified three factors that might require a reduction in the number of FTEs that the DAA employs: efficiency savings suggested from Indecon-Jacobs analysis of 2008 operating costs; a significant fall in passenger numbers requiring fewer staff; and the possibility that T2 will open but be operated by a party other than the DAA.

6.74 In the draft determination, the Commission assumed that the DAA would phase-in any efficiency savings over three years. It implicitly assumed that the DAA would respond immediately to any change in passenger numbers. The Commission did not identify precisely what transitional costs it might include in its calculations if the DAA was no longer operating T2 although it did indicate that where it considered such costs to be consistent with the DAA having efficiently operated the airport, it would be sympathetic to including an allowance.

6.75 In response to the draft determination, some parties argued that the Commission should allow no phasing in of any target opex savings. Given the current economic situation, it was suggested that it would be inconsistent with the difficult choices other firms in the Irish economy had to make as they responded immediately to the downturn.

6.76 In contrast, the DAA cited regulatory precedent and the economic downturn to argue against the Commission's proposed three year phasing. The DAA referred to Indecon-Jacobs' top-down analysis as evidence of the lack of large levels of inefficiency and noted that firms in regulated sectors that are either at or close to the efficiency frontier are not normally required to front-load efficiencies. It argued that if efficiencies are assumed to be front loaded the up-front cost should be allowed. Otherwise, the DAA suggested that a five-year phasing as suggested by

Indecon-Jacobs would be more appropriate and could be achieved without any up-front, one-off costs.

6.77 The Commission has considered the extent to which there may be a rationale for phasing in the efficiency savings it has assumed or allowing one-off costs to realise such savings. The table below compares the DAA's FTE numbers in 2006, 2008, and 2009 with the forecast number of FTEs that the Commission believes would represent an efficient number of FTEs for the following four scenarios:

- Passenger numbers are at 2008 levels and there is no second terminal;
- Passenger numbers evolve as per the Commission's forecast and there is no second terminal;
- Passenger numbers evolve as per the Commission's forecast and the DAA operates both T1 and T2; and
- Passenger numbers evolve as per the Commission's forecast, the DAA operates T1 and an independent operator provides all the FTEs associated with operating T2.

Scenario	2006	2008	2009	2010	2011	2012	2013	2014
No T2, 2008 pax	1,741	1,977	[]	1,832	1,832	1,832	1,832	1,832
No T2, pax as per forecast	1,741	1,977	[]	1,687	1,701	1,723	1,753	1,792
T2 opens, DAA operates	1,741	1,977	[]	1,864	2,028	2,045	2,069	2,099
T2 opens, ind contractor	1,741	1,977	[]	1,659	1,520	1,531	1,545	1,563

Table 6.7: Dublin airport DAA FTEs under four scenarios

Source: DAA (2006-2009); CAR Model 2010-14

The totals are derived based on an allocation rule that assigns 79% of DAA head office costs to Dublin airport, and the rest to Cork and Shannon airports. 2009 number redacted on grounds of commercial sensitivity.

6.78 On the basis of the above analysis, the Commission believes that achieving the target FTE levels only requires significant reductions over and above any natural staff attrition rates if the DAA does not operate T2 (assuming T2 opens in 2010). To reach this conclusion, the Commission has assumed a natural staff attrition rate of 2.5%. This is a higher attrition rate than the 1% rate that the DAA reported for the period 2005-2009, but it is still lower than the 4-6% staff attrition rate for airports suggested by Indecon-Jacobs. Assuming a 2.5% attrition rate implies that, on average, a worker at Dublin airport works there for 40 years. The Commission does not believe that it would be credible to assume an attrition rate that implies a higher length of average tenure than this.

6.79 Should the DAA operate T2, based on its existing payroll costs, the Commission's estimate for total opex costs would be about €7.7m higher per annum on average (2011-14), than if it assumes per-FTE costs in T2 correspond to the benchmark rates provided by Booz. Consequently this appears to provide an upper bound on how much the Commission might consider allowing the DAA in terms of transitional costs. Any allowance greater than this, and the Commission could better protect users by assuming the DAA operates both terminals on existing contractual terms. Reversing the exercise, and assuming FTE costs in both terminals correspond to the benchmark rates identified by Booz, yields an opex forecast about €19.5m lower per annum on average (2011-14) than the Commission has adopted.

6.80 The possibility that staff will not be transferable between different functions has also been considered. Looking at the various staff categories, the only areas where it would be insufficient to rely solely on natural staff attrition rates to achieve the target staff levels are car parks, commercial and support services at Dublin airport. The difference in these areas, assuming a 2.5% attrition rate, is 40 FTEs in 2010, assuming no transferability. There is also a discrepancy for head office staffing levels.

6.81 The Commission has decided not to allow any upfront costs to achieve the opex targets it has set. It has assumed no phasing in of the efficiency targets. Ultimately what is of interest is the total level of staff costs. If the Commission were to make a one-off allowance to help the DAA achieve the target level of FTEs, it would be inclined also to make an adjustment to the assumed level of per-FTE costs to be more in line with Booz's estimates for T2. The latter would lower the total opex allowance. On balance, the Commission has decided not to make either change for the purposes of deriving an opex forecast.

Rolling incentive schemes

6.82 The Commission has decided to include a rolling scheme, but its scale is more limited than proposed at the time of the draft determination. This is because there will be an unusually large number of variables affecting aspects of operations at Dublin airport, such that monitoring how well the DAA has fared compared to a target level of opex will be especially difficult.

6.83 The rolling scheme will only apply to staff operating costs for the following staff categories: airfield services, car parks, commercial, and support services at Dublin airport and DAA head office. These categories were chosen since the Commission has assumed that the costs are independent of whether and when T2 opens and who might operate it. They are also assumed to be independent of passenger numbers.

6.84 The table below shows the total forecast level of costs for these categories of payroll operating costs. Should the DAA achieve total costs in any of these areas lower than the target, the Commission proposes to allow the DAA to keep the benefits for five years before incorporating any such savings into calculations used to make future determinations. When it reports on price-cap compliance, the Commission proposes to comment also on how the DAA fared relative to these targets.

	2010	2011	2012	2013	2014
Opex (€m)	22.4	22.4	22.4	22.4	22.4

Table 6.8: Target opex for categories included in the rolling scheme

7. Commercial Revenues

7.1 This chapter presents the Commission's projections for revenues other than airport charges collected by the DAA from activities at Dublin airport that the Commission includes in the single till. These revenues are referred to as "commercial revenues". The Commission's Determination is calculated using a forecast for commercial revenues that generally assumes that the DAA will seek to maximise such revenues. Such behaviour results in lower airport charges, all else equal, which ordinarily is an outcome that the Commission considers consistent with protecting the interests of current and prospective users.

7.2 The price cap modelling for this Determination assumes that DAA will earn, on average, €126m from commercial revenues annually for the duration of this Determination. This equates to €6.08 per passenger, slightly lower than the €6.20 assumed in the draft determination. The reduced passenger forecast since the draft determination has also resulted in the aggregate commercial revenue forecast being lower than in the draft determination. The table below provides an annual breakdown of the Commission's forecast, as well as out-turn data for 2008 and latest expectations for 2009.

Commercial revenues	2008		2010	2011	2012	2013	2014
Total	€134m		€121m	€123m	€125m	€128m	€132m
Passengers	23.5m		19.5m	19.9m	20.5m	21.3m	22.4m
Per Pax	€5.70		€6.22	€6.18	€6.10	€6.00	€5.89
Average					**€6.08**		

Table 7.1: Commission forecasts for retail and commercial revenues

7.3 The chart below compares the forecast used in this Determination with the Commission's forecast at the time of the draft determination. The main change arises because of the downward revision of passenger forecasts since the draft determination.

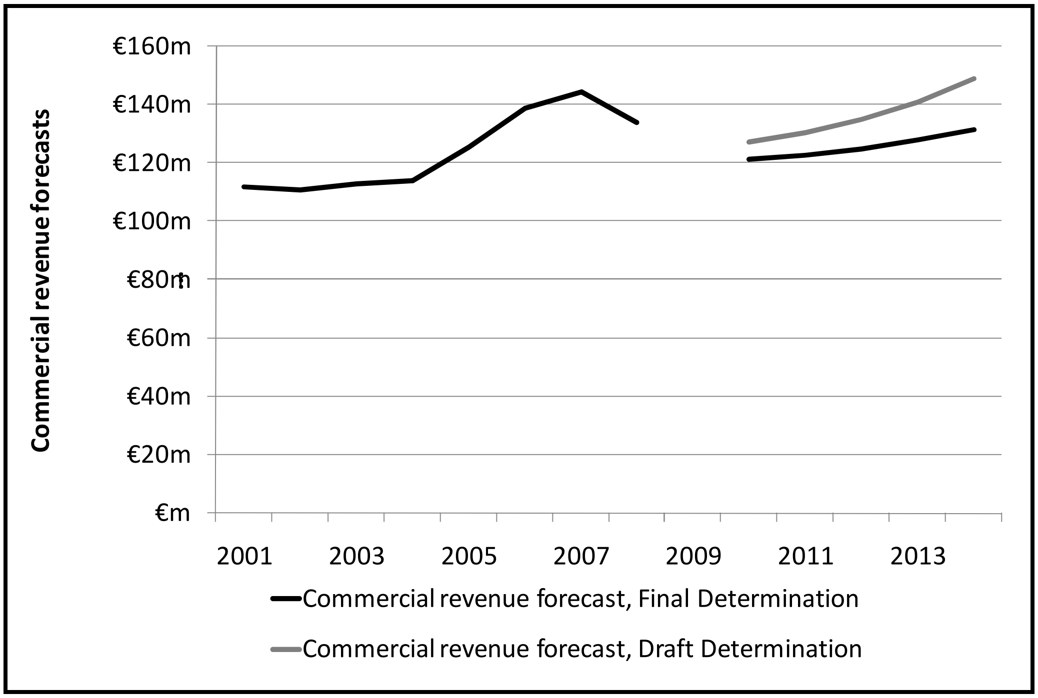

Figure 7.1: Commercial revenue forecasts, draft *versus* final determination

General approach to forecasting future commercial revenues

7.4 The Commission has retained the approach used in its draft determination of forecasting commercial revenues using a "top-down" approach. It has generated forecasts for a number of commercial revenue series based on observed statistical relationships between these series and other variables – passenger numbers, GDP or CSO retail sales. The Commission has, in all cases, then considered whether there are reasons for expecting these historical relationships to cease to hold into the future.

7.5 The Commission continues to believe that a strong advantage of this approach, compared with say a bottom-up study, is that the forecaster does not have to address specifically how every individual factor may affect final out-turns and how they inter-relate. Rather, it starts with the basic premise that the overall trend – itself a function of many supply and demand characteristics – will continue and then considers whether there are good reasons why this assumption should be relaxed.

7.6 The Commission has been able to update its forecast relatively easily to reflect revised forecasts for both passenger numbers and also for commercial revenues in 2009. It has also been able to consider representations made by parties to the draft determination for why some series might be expected to deviate from past trends and/or why the draft determination assumed an inappropriate long-run relationship. The draft determination set out the assumed long-run relationships, known as elasticities, between revenues and other variables (e.g. GDP) in an annex. The financial model made available to parties showed how these relationships were used to forecast commercial revenues.

7.7 The DAA made a number of comments on the Commission's use of a top-down methodology for forecasting commercial revenues as well as its estimation of elasticities. DAA stated that its 2010-2014 forecast, provided to the Commission in April 2009, were based on a

> *"robust and reasonable planning approach whereby assumptions were developed and documented as inputs to a "bottom-up" analysis for each of the components of commercial revenue, considering the specific drivers and market trends affecting them"*[16]

7.8 The Commission does not believe that this representation requires it to change its approach. First, the forecasts the Commission generated for the draft determination were not significantly different to those developed by the DAA. Second, the available evidence is consistent with the Commission's contention that there is a relationship between the various commercial revenue series and other variables. The charts below show the relationships with GDP and passengers, material that was also presented in the draft determination.

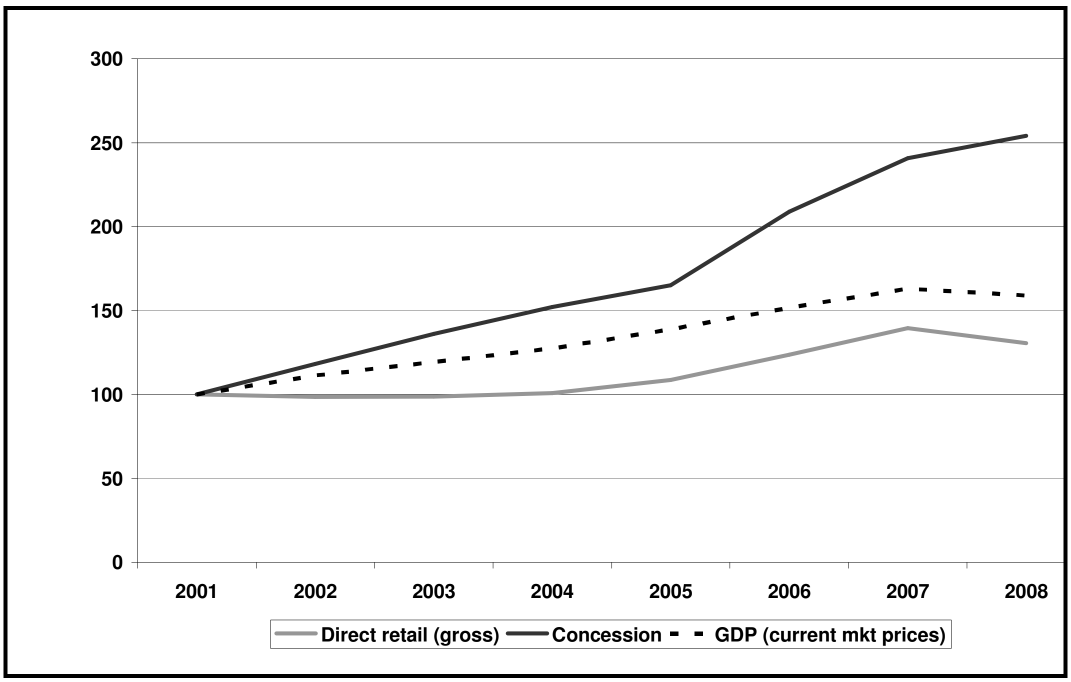

Figure 7.2: Relationship between GDP and retail activities (2001=100)

Source: DAA and Central Statistics Office (CSO), all growth is nominal.

[16] Page 55, DAA response to the draft determination.

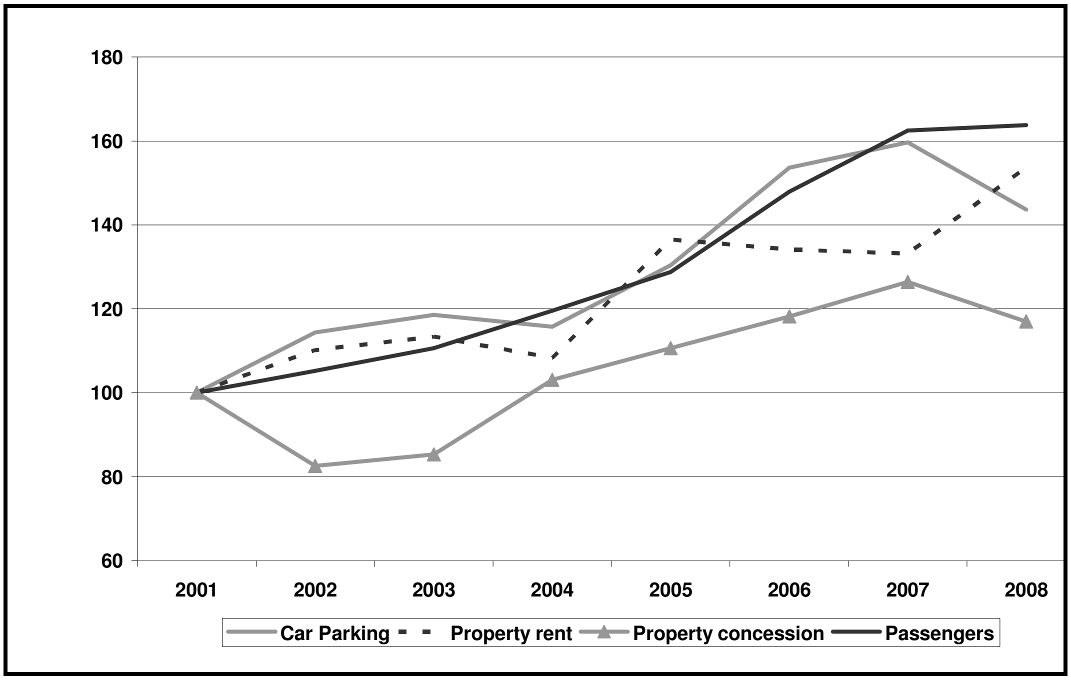

Figure 7.3: Relationship between passengers and car parking, property rents and property concessions (2001=100)

Source: DAA, all growth is nominal.

7.9 The Commission's revised forecasts (using the top-down) approach address, to the extent that the Commission considers it necessary, the DAA's reference in its representation to a number of risks that have or may be realised since it presented its forecasts in April 2009. These risks include: a sustained recession, further declines in passenger numbers, weaknesses in retail demand and higher rates of business failures to key clients and concessionaires. The Commission has adjusted its passenger forecast downwards. It does not accept that the general outlook for the Irish economy is more pessimistic than it was in April (as reported in chapter five, most of the GDP forecasts that the Commission has monitored have become more optimistic since the draft determination). It therefore does not accept that the risks associated with retail demand or business failure risk are necessarily higher than they were in April 2009.

7.10 The DAA questioned the use of relationships estimated during times of economic growth for the purposes of making forecasts during recessionary periods. The Commission acknowledges that this is one factor that may cause an observed long-run relationship to no longer hold. This is something that the Commission has considered when deciding whether its final forecasts used in the Determination should correspond to those generated assuming that the observed relationships hold true. In particular, the Commission has looked at the available evidence on how consumer spending has evolved during the economic recession.

7.11 The Commission has accepted the DAA's representation arguing that it was wrong to estimate any relationships without controlling for inflation. The estimates used in the calculations for the final Determination have been re-calculated using real rather than nominal inputs.

7.12 The Commission has also considered whether there is merit in revising down its commercial revenue forecast given its allowances for capex. The DAA argued that its forecasts were predicated on a number of investments occurring for which the Commission's draft determination made no allowance. Absent those investments occurring, the DAA argued that it would be unreasonable to expect it to achieve the commercial revenue forecasts set by the Commission.

7.13 The Commission accepts that capital investments will affect commercial revenues, but does not accept that it necessarily needs to reduce its forecasts because of its decisions relating to capital projects. The forecasts are based on a long-run relationship between revenues and GDP and use 2009 data as the starting point for generating forecasts. The forecasts are therefore informed by data on revenues generated from the DAA's existing facilities. The need to adjust these allowances would therefore arise if the Commission concluded it had allowed insufficient capex to maintain existing facilities (pointing to a reduction) or significant new investments designed to generate new revenue streams (pointing to an increase). The boundary between investments that constitute necessary on-going refurbishment and new projects will at times require a judgment. There is similarly scope for parties to disagree about the amount of capex required to maintain existing facilities. The Commission is satisfied that it should be possible for the DAA to realise a target for commercial revenues consistent with historic revenue trends given the investments it has decided to allow into the RAB. This includes €10.6m for retail refurbishments, an allowance for work on the existing multi-storey car park (MSCP), and some allowance for office refurbishments.

7.14 For reasons set out below, the Commission believes that if there is a case for revising its forecasts to be consistent with capex allowances, the stronger case is for an upward revision. In DACC's representation to the Commission, it argued that the T2 facility should allow the DAA to generate more commercial revenues than it has in the past. As discussed later in this chapter, there is some evidence that could be cited to support such a claim.

7.15 DACC's representation sought a move way from a top-down approach to one which explicitly includes certain capex-related revenues into the Commission's forecasts. Investments for which such a treatment was sought include T1X retail and concession revenues, T2 related revenues, and other investment such as refurbished office accommodation. The Commission has rejected this representation to the extent that it would imply moving towards a bottom-up, item-by-item approach to forecasting commercial revenues for the reasons outlined above. As previously mentioned, the Commission has considered whether it should adjust its forecasts to be consistent with its allowances for capex.

Retailing activities

7.16 Retail activities at Dublin Airport are categorised into direct (i.e. in-sourced) retailing undertaken by DAA and concession retailing carried out by third parties under contract to DAA and who pay DAA either a percentage of turnover or a guaranteed minimum sum, or both. Our projections for both are set out below.

7.17 The table below sets out the Commission's forecasts for direct retail and concession retail revenues. It also shows the forecasts used in the draft determination.

	2010	2011	2012	2013	2014	Total
Direct retail (net of cost of sales)						
Final determination	29	30	30	31	32	151
Draft determination	33	33	34	36	37	173
Concession retail revenues						
Final determination	22	22	23	25	26	118
Draft determination	25	25	27	29	31	137

Table 7.2: CAR 2010-2014 retail and concession forecast (€m, 2009)

7.18 Since the draft determination, the Commission has received evidence causing it to revise down estimates for 2009 passenger numbers and retail revenues. These downward revisions are one reason as to why the Commission forecasts lower retailing revenues than in the draft determination. The downward revision of the 2009 figures has a more significant effect on the commercial revenue forecasts not only because of the scale of the revision, but also because the impact is felt immediately from 2010 onwards.

7.19 For both series, the Commission estimated the long-run relationship with passenger numbers, and used the passenger forecasts reported in chapter three to generate forecasts for direct retail sales and concession revenues. The estimated elasticity relationships are 0.56 between real direct retail revenues and passengers and 1.3 between real concession revenues and passenger numbers. These revised estimated relationships (both now reporting relationship with passenger numbers instead of nominal GDP or CSO retail data) have a smaller impact on the forecast compared with the downward revision of the expected 2009 outturns.

7.20 Two mains reasons were put forward in the representations that the Commission received for why retailing activities at Dublin airport might deviate from past relationships:

- The downturn in the economy means consumer behaviour will differ to in the past (DAA); and
- T2's design should allow the DAA to generate more retailing revenues at Dublin airport than has previously been possible (DACC).

7.21 The Commission considers these points in turn below. The Commission does not reject either representation. The conclusions it draws from the two points work in opposite directions: the possible effect of an economic downturn suggests it may be prudent to adopt lower retail revenue forecasts; while the extra floor space in T2 does appear to offer an opportunity for the DAA to earn greater commercial revenues than in the past. The Commission believes that the latter effect may be more significant, but the uncertainties are sufficient that the Commission has concluded that it is more prudent not to adjust its top-down forecast.

7.22 DAA provided evidence on economy wide retail sales from the CSO to demonstrate economy-wide weakness in retail demand. At the time of DAA's submission month-on-month growth showed a decrease in May 2008 for the core series (which excludes the motor trade). Year-on-year growth, expressed as a three month moving average, had declined 8.3%, compared with 7.7% in April. Since then there appears to be some stabilisation in the retail trade, with August figures showing a 5.6% decline year on year. Nevertheless, the available evidence does lend some credence to the DAA's concerns. There has been a growth in savings, with the CSO reporting that the household saving ratio has risen from about 2% in 2007 to over 4% in 2008.[17] The Commission's forecast has already been revised down because of more recently available data and forecasts concerning retails revenues and passenger numbers in 2009. In making this decision, the Commission rejected DACC's representation to use 2007 as the base year for the purposes of forecasting retail revenues since retail sales and passenger numbers were both much higher in 2007 than they are today.

7.23 By starting its forecasts from a lower base, the Commission has already accounted for some of the risks the DAA has identified. The Commission does not think any further adjustments are necessary, particularly given the evidence presented below relating to the possible effect of T2 opening.

[17] Central Statistics Office, "Institutional sector accounts non financial 2008", www.cso.ie, 10 November 2009.

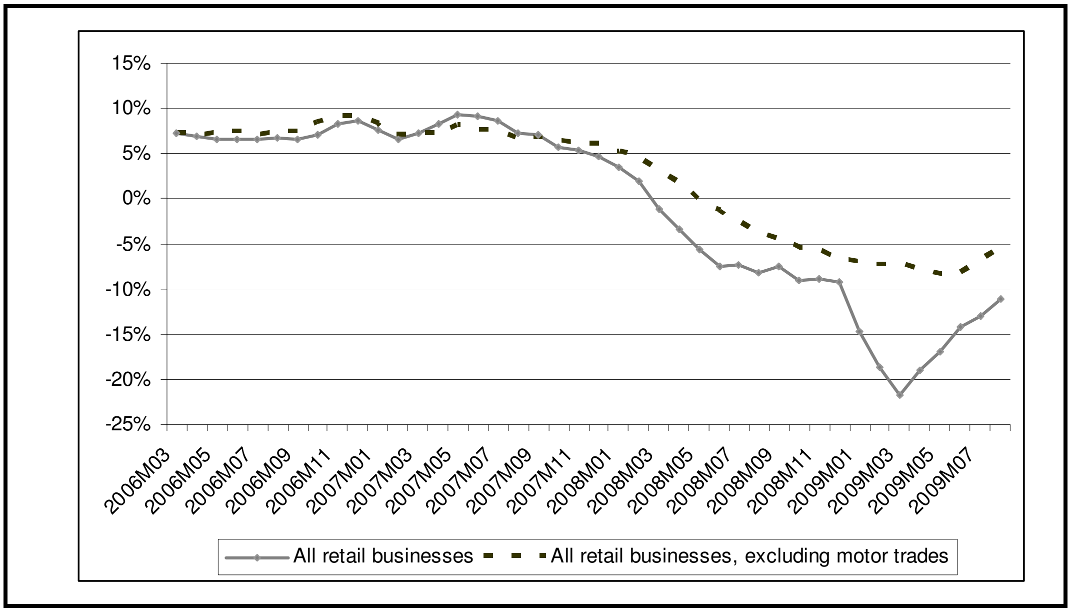

Figure 7.4: Year-on-year growth in the CSO's retail sales index expressed as a three month moving average

Source: Central Statistics Office (CSO), all growth is nominal.

7.24 In relation to T2, DACC argued that there should be a further uplift in retail income per passenger of at least 10% for those passengers using T2, or 4% over the airport as a whole. While it is unclear how DACC estimated this 'uplift', it did outline its rationale for such an adjustment:

> *"unlike T1, T2 has allegedly been designed from the outset to improve the passenger experience and to offer a balance of retail and catering outlets over two floors"*[18]

7.25 The Commission has reviewed the available evidence, and there does appear to be some support for believing that T2 might allow more commercial revenues than has previously been the case. The 2009 Moodie Report on commercial revenues reports that Narita International Airport in Japan improved its commercial performance after the opening of its second terminal.[19] The report also notes that the international average commercial floor space per passenger in its survey was 0.69 square metres per thousand passengers in 2008/2009, with the European average slightly lower at 0.65. On the basis of econometric analysis the Moodie report also found that there was a relationship between the scale of commercial performance and the performance of an airport's commercial income. It concluded that an increase in commercial floor space allows the airport operator to execute commercial formats that allow for a greater increase in returns.

7.26 T2 will add approximately 8,500 square metres of retail space. Current estimates suggest about eight million passengers per year will use the facility, which roughly equates to one square metre per 1,000 passengers.

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[18] Page 26, DACC response to the draft determination.

[19] The Airport Commercial Revenues Study, 2008/2009, published by The Moodie Report in association with RDG Solutions, July 2009

This is 40% greater than the international and European averages. This would suggest that, all things equal, it might be reasonable to expect an up-lift in commercial revenues following the opening of T2.

7.27 The Commission has assumed an up-lift in retailing revenues equal to €5m each year associated with T1X opening. Consistent with its 2007 interim review, the Commission has made an allowance for recovery of costs associated with this investment that exactly offset the assumed commercial revenues. It is charges neutral such that a higher or lower forecast for these incremental revenues would not affect the allowed airport charges. It will affect how much of T1X's costs are rolled forward when setting the regulatory asset base ("the RAB") in 2014. The Commission will look at the evidence in 2014, with the benefit of five-plus years of data, of the extent to which T1X appears to have generated the incremental revenues assumed in this Determination and make an adjustment accordingly. The Commission has rejected representations from both DACC and the DAA proposing that it change, in different ways, its proposed treatment of T1X. The approach adopted is consistent with what was proposed in the 2007 interim review.

Car Parking

7.28 The table below sets out the Commission's forecasts for revenues from car parking that it expects the DAA will earn. For comparison, the forecast in the draft determination is also included.

Car Parking forecast	2010	2011	2012	2013	2014	Total
Final determination	26	26	27	27	28	134
Draft determination	29	29	30	32	33	153

Table 7.3: 2010-2014 car-parking forecast (€m)

7.29 The main cause of the change since the draft determination is the lower forecast passenger numbers at Dublin airport and a revised forecast for 2009 car parking revenues. The Commission has also re-estimated the relationship to use only real variables, and estimates an elasticity relationship of 0.4 between real direct car parking revenues and passengers.

7.30 The DAA and DACC both made representations suggesting that the Commission should adjust, in opposite directions, its forecast for car parking revenues to be consistent with its proposed treatment of a new multi-story car park ("MSCP") for T2. DAA argued that the revenue forecast should be revised down since the Commission had not made any allowance to fund capital project CIP1.006 in its latest capital investment programme. The Commission has rejected this representation since it has already made an allowance for a new car park in T2, part of the DAA's investment plan (CIP2006) that was considered at the time of the 2007 interim review.

7.31 DACC argued that the expected new T2 MSCP required an upward adjustment in the car parking revenue forecasts. The Commission has rejected this representation since it considers the new MSCP will merely facilitate short term parking demand for passengers who will now be using the new terminal but in the past would have used the short-term car parking facilities associated with the existing terminal. As the Commission does not assume the new car park will generate a net increase in car parking, it does not believe it should adjust its forecast.

7.32 DACC disagreed with the Commission's view that increased competition contributed to a structural change in car park pricing and revenues in 2008. The Commission believes its view is supported on both empirical and theoretical grounds and rejects DACC's representation that revenues should be based on 2007, the year before a recent entry into this market by competitors.

7.33 The draft determination suggested that the Commission would be open to re-evaluating the scope of the regulatory till, for example by possibly excluding investments and revenues that may not be directly related to the regulated services described in the Act.

7.34 Both the DAA and Ryanair expressed support for the Commission's indication in the draft determination that it would be open to re-considering whether it should include car parking revenues within the single till. However, the Commission has not made such a change as it concluded there was insufficient time to consider such an option, a point accepted by the DAA.

Property rents

7.35 Property rents are generated from the rental of property to airport users and other entities. This property portfolio includes office space, hangers, warehouses, check-in desks and other airport-specific facilities such as the fuel depot.

7.36 The table below sets out the Commission's forecasts for property rental income at Dublin airport. It also includes the forecasts used in the draft determination.

Property rental revenues	2010	2011	2012	2013	2014	Total
Final determination	12	12	12	12	13	62
Draft determination	15	15	15	16	16	78

Table 7.4: CAR 2010-2014 property rent forecast (€m)

Note: CAR draft determination includes ATI revenues

7.37 Since the draft determination, the Commission has updated its forecast to reflect more recent 2009 data on property income and its revised forecast for passenger numbers. This is the main cause of the lower forecast than in the draft determination. The Commission also adjusted its forecast to exclude revenues from ground-handling fees for access to installations (ATI fees), which are separately discussed later in this chapter. Finally, the Commission re-estimated the relationship between real property rental income and passengers using real data (and excluding any ATI revenues) and found an elasticity relationship of 0.3.

7.38 Over the medium-term the Commission does not accept the DAA's assertion that property-rental income is independent of passenger numbers. At the time of the draft determination DAA's own projections for property rental income over the 2010-14 period broadly tracked projections for passenger growth over the same period. The available evidence suggests that the two series have tended to move together over the period since 2002. They do diverge in some years, possibly reflecting the timing of specific factors such as rent-reviews and contract renegotiations. But the Commission's interest when making a determination is to forecast expected commercial revenues over the next five-year period. The Commission is not aware of any factors that suggest property rental income should deviate from long-term trends for all five years of the forthcoming Determination.

7.39 The forecast for property rents includes a downward adjustment of €1.6m each year because the Commission has not made any allowance for capex for hangar maintenance for reasons set out in the next chapter. The DAA made this point in its representation. The DAA also argued for further adjustments because of the capex allowances for tenant and office accommodation, arguments that the Commission has rejected.

Property Concessions

7.40 Revenues from property concessions cover a range of activities, including the provision of space, facilities and contracts to commercial entities operating in the airport. The Commission's forecast for property concession income is in the table below, along with the forecast used in the draft determination.

Property concessions	2010	2011	2012	2013	2014	Total
Final determination	16	16	16	17	17	82
Draft determination	17	18	18	19	20	92

Table 7.5: CAR 2010-2014 property concession forecast (€m)

7.41 The forecast is lower than in the draft mainly because it now uses more up-to-date data for property concession income, as well as lower passenger forecasts. The assumed elasticity of 0.44 was estimated using passenger numbers and property concession revenues in real terms.

7.42 For similar reasons to those outlined when discussing car-parking revenues, the Commission has rejected the DAA's argument that it should revise the forecast down because it has not made an allowance for a new MSCP.

7.43 The only other representation received was from DACC, which endorsed the Commission's "prudent approach to projecting forward property income growth".

Property advertising

7.44 The table below sets out the Commission's forecasts for property advertising income at Dublin airport. It also includes the forecasts used in the draft determination.

Property advertising	2010	2011	2012	2013	2014	Total
Final determination	4	4	4	4	4	20
Draft determination	3	4	4	4	5	21

Table 7.6.: CAR 2010-2014 property advertising forecast (€m)

7.45 For the draft determination the Commission assumed a step-increase in property advertising revenues, but thereafter assumed that property advertising will continue to grow in line with passenger numbers. The DAA argued that this approach was opportunistic since the Commission had taken the DAA's bottom-up forecast where it was higher than the predicted by the top-down model. The Commission does not believe that this representation requires it to change its approach. As previously stated, the Commission views the top-down outputs as a good first approximation but will then consider evidence that might support a step change. In the case of property advertising, the data the DAA provided from a bottom-up analysis was markedly different to the Commission's top-down forecast. Considering available evidence from elsewhere, the Commission found that there did appear to be evidence that historically the DAA has generated fewer revenues from property advertising than some other airports. The DAA also indicated that it expects the opening of new facilities to provide additional and better advertising space, in terms of audience flow and dwell times. There are well founded reasons to expect higher revenues from property advertising at Dublin airport than has historically been the case.

7.46 The Commission has accepted the DAA's representation that the forecast should be revised down because of its decision not to make a capex allowance for the DAA's T1 passenger processing enhancement.

Other Commercial Income

7.47 Income from "Other Commercial Operations" comes from a variety of activities, including:

- Executive lounges and VIP services
- Taxi permit income
- US Customs Border Protection Income

- Income from water-disposal services, utility handling charges, communications and cabling charges and identity badge income.

7.48 The Commission has retained the forecast used in its draft determination for other commercial income. It received no representations that it considered warranted changing this forecast.

Other commercial income	2010	2011	2012	2013	2014	2010-2014 total
Final determination	6	6	6	6	6	28
Draft determination	6	6	6	6	6	29

Table 7.7: CAR 2010-2014 Other commercial income forecast (€m)

Source: figures subject to rounding

Access-to-installation (ATI) fees

7.49 These fees relate to charges that the DAA levies ground handlers at the airport to access installations needed to provide ground handling services. In the draft determination ATI revenues were included in the reported forecasts for income from property rental. In response to representations, the Commission has provided a separate forecast for ATI revenues and excluded this category of revenues from the forecast for property rental revenues. The Commission's forecast for ATI revenues are set out below.

	2010	2011	2012	2013	2014	Total
Revenues from ATI fees	2	2	2	2	2	8

Table 7.8.: CAR 2010-2014 ATI Revenue Forecast (€m)

Figures subject to rounding

7.50 Unlike for other commercial revenues, the Commission proposes to apply a "clawback" or "top-up" at future determination should out-turn revenues from ATI fees not correspond to this forecast.

7.51 The DAA is required to seek approval from the Commission for changes to ATI fees. At Dublin airport the only ATI fees that currently have approval are fees for check-in desks. Approval requires that the fees satisfy four criteria: relevancy, objectivity, transparency and non-discrimination. The approval process is governed by EC legislation and approval does not depend on what the Commission assumes about ATI fees when making an airport charges determination. It was in this context that the Commission issued a consultation notice in March 2008 (CN2/2008), in which the Commission first raised the possibility of changing how it might treat ATI fees for the purposes of making a determination.

7.52 To minimise the risk that DAA would use the ATI regulations to facilitate an increase in its ATI revenues over and above that forecast in the Determination, the Commission has decided to allow for the possibility of 'claw backs' and 'top ups' in instances where the DAA collects more or less revenue from ATI fees than forecast at the time of the last determination. This change will not apply retrospectively (i.e. to the 2005 determination). The change means there is no incentive for the DAA to seek to maximise revenues from ATI fees. This addresses the concerns of airport users about the danger of 'double counting' if the DAA increases ATI fees or introduces a new ATI fee after a price cap has been set, while not requiring either the Commission or the DAA to anticipate precisely how revenues from this source will evolve in the next five years if the DAA is not to be financially disadvantaged.

7.53 In its representations DACC stated it preferred redefining airport charges to include check-in desks. The Commission has previously expressed some sympathy with this position, but indicated that it does not have the authority to make such a change. Nor can it mandate the DAA to commit to a price path for ATI fees, DACC's second preference.

7.54 DACC noted that by assuming a fixed revenue path for ATI fees, through a claw-back or top-up mechanism, the cost per desk would rise if airlines reduced their demand for check-in desk facilities. While the Commission accepts this point, it notes that if demand for check-in desks does fall its approach avoids the DAA being financially disadvantaged because of an erroneous assumption about future ATI fees, which provides symmetry in the treatment of risks associated with out-turn ATI revenues not corresponding to forecast levels.

8. Capital Costs

8.1 This chapter discusses the capital costs building block of the price cap calculation. It is divided into four sections: the principles to remunerating investments across a number of determinations, the opening RAB, post-2009 capex and the cost of capital.

Principles for rolling forward the RAB

8.2 The draft determination included an annex setting out the Commission's proposed approach to rolling forward the RAB between determinations. Such guidelines have immediate relevance for what the opening RAB might be in 2010; they also are relevant for the Commission's decisions regarding post-2009 capex since they provide the DAA with guidance on how any investment the DAA actually undertakes at Dublin airport in the next five years is likely to be treated at future determinations.

8.3 A number of parties commented on the principles, including Aer Lingus, the DAA, DACC, Ryanair, and UPROAR. Parties generally welcomed the publication of such principles, while not necessarily always agreeing with the principles proposed in the draft determination's annex. Having considered the representations made, the Commission has finalised the principles it intends to use for rolling forward the RAB. These principles are set out in Annex 3.

8.4 The three biggest concerns relating to the draft principles were arguably:

- The proposal to group projects and assets when comparing out-turn capex with what the Commission had indicated it would allow at the preceding determination;
- A desire for greater clarity about the extent to which individual users have a veto over changes in the DAA's investment plans; and
- The use of indexed historic costs for the purposes of calculating the RAB.

8.5 To address the first two points, the Commission has sought to strike a balance between allowing the DAA the flexibility to develop the airport in an efficient and economic manner while ensuring sufficient accountability over cost management to ensure that the interests of users are protected.

8.6 The Commission has decided to continue grouping projects and assets for the purposes of reconciling actual capex with allowed capex, rather than seeking to reconcile the costs of every individual capital project with what was allowed at the time of the last determination. The DAA supported this approach. In contrast, DACC opposed it since it thought grouping projects would allow the DAA to overspend on some projects without any penalty. DACC was also concerned that it would allow the DAA to undertake additional projects not included in the CIP and for which users were never consulted. Finally, DACC also thought that the DAA might have an incentive to defer expenditure on individual projects consulted on until a later determination and effectively require users to pay twice in terms of a return on capex for such a project.

8.7 The benefits of allowing the DAA some flexibility in managing Dublin airport is why the Commission has chosen to adopt its approach of grouping capex, notwithstanding DACC's concerns about overspend on individual projects. The Commission recognises that individual budget items will sometimes cost more or less than anticipated at the time a CIP was produced or when the Commission made a determination. It is not possible to forecast exactly the costs of every item in a capital programme covering a five-year period. Between the time of a determination and the DAA actually commencing capital works, the DAA may identify an alternative way to deliver the outputs for less than was allowed. For example, it might be that nearer the time of a project the DAA concludes that spending more on preparatory works will realise greater cost savings when it comes to build a new installation. If the Commission looked individually at the costs of preparatory works and the costs of building the installation, it might conclude that the DAA had overspent on preparatory works and disallow some of these costs from the RAB while allowing only out-turn capex for the actual building work. The DAA would be penalised for having identified a more efficient approach to delivering the output. If the Commission's RAB roll-forward principles did not group, they would likely deter the DAA from revising its approach even where there are costs savings in aggregate. For some more general, small-scale maintenance capex, it is not even possible to identify precisely which items will need replacing or updating. For these reasons, the Commission believes 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 the DAA the discretion to adapt its plans as appropriate, subject to respecting the overall budget allowed for that grouping.

8.8 The Commission has concluded that DACC's other stated concerns with grouping can be addressed while retaining the approach of grouping items of capex. The principles on RAB roll forward do not automatically allow the DAA to spend on projects not consulted on while deferring expenditure on items which had the support of users following a consultation and for which the Commission had made an allowance. The Commission will outline what outputs it expects the DAA to deliver when making a capex allowance for a given grouping. If the DAA fails to deliver all these outputs, the Commission will seek to understand why and will ordinarily adjust the RAB to clawback revenues (including any associated return on capital) allowed on the basis of the DAA providing an output that subsequently it did not deliver. Only if the DAA is able to deliver all the outputs required for less than the Commission allowed will the DAA be able to undertake additional projects without consulting with users. Additional capex that takes the DAA's total spend for a given grouping over the allowed budget at the time of the last determination will be subject to scrutiny to see if the extra spend had the support of users.

8.9 The Commission cannot provide total clarity to either the DAA or to users about how it will treat investments undertaken in the absence of unanimous support. The specifics of the situation will be important. It will be prudent for the DAA to defer investments that have not previously been reviewed by the Commission at the time of a determination, except where there is clear and overwhelming support for the project. To protect the interests of current and prospective users of the airport, the Commission is keen to avoid the DAA forming an expectation that it can undertake an investment and after the event automatically assume that it will be allowed to recover the costs through a higher price cap at future determinations regardless of any user opposition.

8.10 Users are nevertheless encouraged to engage in constructive consultation with the DAA. In the absence of any agreement the DAA's financial incentives will be to stick to the investment plans agreed by the Commission at the time of the most recent determination. If parties refuse to consult constructively between determinations, the outcome will be the Commission making allowances for a multi-year investment plan that the DAA is then unlikely to change. Trying to guess what investment needs will be for the next four-plus years is fraught with difficulties. Events since the last interim review illustrate this point: the DAA's 2006 CIP envisaged a new runway and a number of other projects occurring within five years which have subsequently been deferred. There should be scope for users and the airport to identify changes that allow for a more efficient and economic development of the airport to meet the needs of current and prospective users. But if the parties fail to identify such gains, then the Commission is likely to rely on what was agreed at the time of the preceding determination when deciding on what RAB to roll forward: the DAA will not be remunerated for undertaking projects not previously approved but will be remunerated for investments allowed at the last determination even where the need for those projects subsequently diminished.

8.11 The Commission will continue to use indexed historic costs to estimate the RAB. The DAA indicated that it continues to prefer the use of replacement costs rather than indexed historic costs, although it acknowledged that changing to replacement costs would require more time to effect than was available to the Commission between the draft and final Determination. Aside from this practical consideration, the Commission is also concerned that such a switch would reduce the certainty the current system provides investors and users about how investments will be remunerated. Once the Commission has allowed an amount into the RAB, parties currently know that there will be a return on and return of this sum. There is no need for the Commission to decide afresh at each determination what the replacement cost for each asset is, an exercise that is bound to be contentious. The Commission questions whether the DAA would undertake any large-scale investments, such as building a new terminal or new runway, if there was a prospect that at a later determination the Commission might conclude that the replacement cost for such a facility was much less than the DAA had actually spent.

8.12 The use of indexed historic costs does not, in the Commission's view, require an adjustment for the "debt-inflation shield", notwithstanding Ryanair's arguments to the contrary. If the Commission allows an investment for €100, it identifies a suitable depreciation profile in real terms. Each year it adjusts the amount remaining in the RAB by subtracting that year's depreciation charge. It also updates the sum in the RAB and future depreciation charges to account for changes in the CPI. Given this indexation approach, the Commission identifies a suitable rate of return on the capital. The Commission has concluded in past determinations and in this Determination that a pre-tax real cost of capital represents a suitable rate of return. The capital structure that the DAA chooses for its business is not regulated by the Commission. There are incentives in place for the DAA to try and secure cheaper sources of funding. Where there is evidence that such opportunities exist at the time of a determination, the Commission would allow a lower rate of return on capital. The Commission's decision on the rate of return to allow for this Determination is discussed later in this chapter. Annex four discusses the debt-inflation shield arguments further.

8.13 Parties raised a number of points relating to particular scenarios the RAB roll-forward principles. These points were considered in finalising the text in Annex 3 and appropriate changes to the principles proposed at the time of the draft determination have been made.

Opening RAB 2010

8.14 The opening RAB used by the Commission to estimate an appropriate price cap is €836m. Aside from new investments, discussed later in this chapter, the Determination also allows for increases in the RAB if and when T2 becomes operationally ready and if and when annual demand exceeds 33mppa. The opening RAB is less than proposed in the draft determination for two main reasons:

- The indexation of the RAB uses up-to-date data on changes in CPI, which show that this series has fallen 6.6% in 2009 (October – October), considerably more than the 1% assumed in the draft determination;
- a reduced allowance for the costs associated with Pier D.

8.15 The table below provides a summary of how the Commission derived the opening RAB.

Deriving the opening RAB (2009 prices)	Draft (€m)	Final (€m)
Opening RAB 2006	673.1	635.3
Allowed capex 2006-2009	422.0	392.8
Regulatory depreciation 2006-2009	-204.1	-192.6
T2 Box 1 trigger (T2 operationally ready)	672.4	634.6
T2 Box 2 trigger (2009 pax nos exceed 33mppa)	109.5	103.3
2010 opening RAB if T2 box 1 trigger not met	**891.0**	**835.5**
2010 opening RAB if T2 box 1 trigger met	**1564.5**	**1470.1**
2010 opening RAB if both T2 triggers met	**1674.0**	**1573.4**
Breakdown of capex allowance	**€m**	**€m**
Interim review allowance excl T1X, T2, & head office	355.8	335.8
Airfield projects over/underspend	-18.8	-16.8
Other capacity projects over/underspend	-1.1	-1.0
Pier D project over/underspend	15.7	8.1
General projects over/underspend	-17.4	-16.4
Runway project fees over/underspend	-3.3	-3.1
Projects undertaken not in the 2006 CIP	29.3	27.9
T1X as per interim review	59.2	55.9
Head office as per interim review	13.9	13.1
Box 2 adjustment as per appeal panel	-11.3	-10.7
2006-2009 capex allowed	**422.0**	**392.8**

Table 8.1: Derivation of the opening RAB

8.16 Aer Lingus, the DAA, DACC and Ryanair provided specific comments on the opening RAB proposed in the draft determination. The comments related to how the Commission had reconciled actual and outturn capex in the period 2006-2009, how the Commission treated T1X and T2 capex in the RAB, and also proposals for a number of other adjustments to the starting RAB. The chart below illustrates the very different views parties took about what the opening RAB in 2010 should be assuming T2 is not operationally ready by 1 January 2010.[20]

[20] Aer Lingus is not included in the chart since its representation is consistent with the opening RAB sought by DACC. Ryanair, although also a member of DACC, made representations not always consistent with the opening RAB sought by DACC.

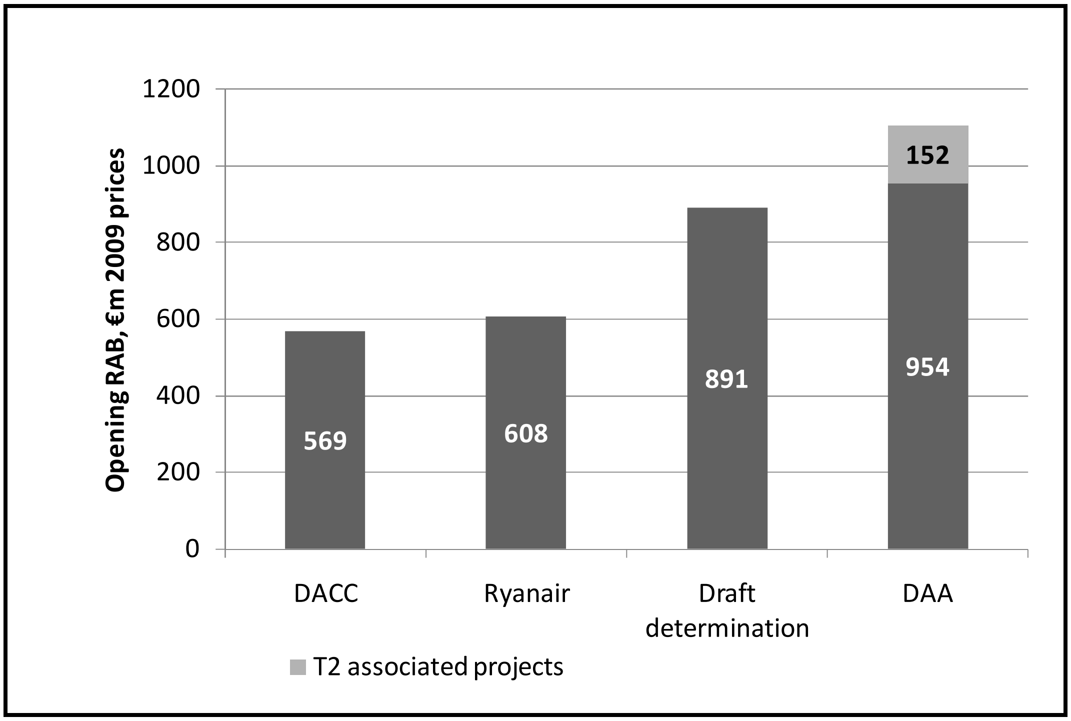

Figure 8.1: Opening RAB 2010 – responses to draft determination

Source: Commission calculations based on representations received from DACC, Ryanair and the DAA

Capex reconciliation

8.17 The main change to the draft determination concerning the opening RAB relates to the allowance for pier D costs. The Commission's proposals to allow approximately half of the pier D 'overspend' into the 2010 opening RAB attracted diverging responses from the airlines and the DAA on this proposal.

- DACC (and, separately, Ryanair) argued that the opening RAB should reflect the fact that the pier D project was both oversized and over-specified. DACC argued that the opening RAB should include 50% of the Commission's original allowance (a gross figure of €45m); Ryanair argued in favour of a higher amount, corresponding to 50% of the DAA outturn expenditure (a gross figure of €60m).

- Aer Lingus argued that the cost over-runs for pier D are part of the general investment risks that the airport's cost of capital should capture.

- DAA called for the Commission to allow all of the pier D outturn costs, claiming that the overall project costs compare favourably with international benchmarks.

8.18 The Commission has found the separate representation from Aer Lingus the most persuasive. Given Aer Lingus' argument that there should be a strong bias in favour of not allowing cost overruns to be remunerated given that there is already implicitly a cost of capital allowance for such risks, the Commission has revisited its decisions concerning what pier D costs to include in the RAB. The Commission has concluded that the additional costs of the walkway link (€8.1m) can be attributed mainly to the planning process and should therefore be allowed. The remaining €22m of overspend relating to pier D has been disallowed. The adjustment to the RAB sought by DACC and Ryanair would involve the Commission reneging on previous commitments to remunerate costs associated with the pier D project. Such an action would deter the DAA from undertaking future investments, an outcome inconsistent with the economic and efficient development of the airport. Nor is the Commission convinced users' interests would be protected if it routinely allowed the DAA to recover additional costs above the initial capex allowance. In the case of pier D, the Commission has not been convinced that the DAA consulted with users and established that they supported the additional work given its associated costs.

8.19 The opening RAB proposed in the draft determination has been revised up by €1m in response to the DAA's representation that CIP6.037 runway 10/28 stop-bars project should more appropriately be grouped under *Airfields* rather than *Other Capacity.* This decision is not intended to set a precedent that projects can be re-classified across groupings. When arriving at an allowance for 2010-2014 capex, the Commission has sought to minimise such a risk by stating what outputs it expects for each grouping.

8.20 The only other change to the draft determination relating to the capex allowance for the period 2006-2009 given outturn expenditure is to allow an additional €0.3m for engine run-up area fees. The DAA pointed out that the project had been excluded from the Commission's reconciliation. The Commission has rejected DAA's arguments that its reconciliation excluded projects CIP4.019 and CIP7.020 relating to the temporary forward lounge and pier D fit out. The reported outturn capex amount (€124.9m) for pier D included the costs of both of these projects.

	DAA outturn spend (€m)	
	2006 prices	**2009 prices**
Pier D	114.9	118.5
Pier D fit out for tenants	1.3	6.1
TFL	6.0	6.1
Pier D capex remunerated pre-06		-7.2
Total	**122.2**	**117.9**

Table 8.2: Pier D outturn costs

8.21 The Commission has also rejected a number of other representations made by DAA that the DAA considered warranted a higher opening RAB. The DAA claimed that the outturn for project CIP7.025 central immigration pier A & D exceeded the allowance because of changes in user requirements. For this reason, to be consistent with the Commission's proposed RAB roll-forward principles the DAA thought that the outturn costs for this project should be allowed. The DAA attributes the "overspend" to a second phase of the project delivering extended queuing areas for peak usage. The Commission has rejected this argument since the 2006 CIP makes no mention of a second phase of work but specifies that one of the outputs of the project is to "provide flexible facility for GNIB to meet *peak* flows from either A or D as required" [emphasis added by Commission].[21] On this basis, the Commission views the outturn capex as more consistent with a cost overrun than a changed specification since the Commission made an allowance for the project.

8.22 The Commission considers that the 2006-09 capex allowance for each project already includes an allowance for project management costs. It therefore considers that DAA's request for an additional allowance for project management costs would represent double counting. The Commission does not accept that it has incorrectly excluded capitalised project management costs from the capex reconciliation exercise. The 2006-2009 capex allowance was based on an appraisal of project costs by Rogerson-Reddan & Vector (RRV) that included an allowance for project management costs. In their report to the Commission, RRV stated under the heading of "General Principles":

> *"All costs are calculated at mid 2006 levels, and do not include any allowance for future inflation.... All costs exclude VAT... The DAA's costs include the estimated construction cost, together with an allowance in respect of "soft costs", typically relating to Design Team fees, including as appropriate* ***Project Management****, Architectural Design, Engineering Design, Quantity Surveying, Construction Management, Site Supervision, etc. This was further clarified by the DAA, in response to queries, where it was noted that these percentages do not generally include for Programme Management Services, which are the subject of a separate CIP project. The typical allowances for soft costs included by the DAA are in the range of 10% to 15% of construction costs."*[22] [Commission emphasis]

8.23 The DAA considered the Commission to have been opportunistic to clawback €10.7m of costs relating to the return on capital received for T2 box 2 over the period 2006-2009. In contrast, the airlines supported this adjustment. The Commission believes that this treatment is consistent with what it stated in its decision on the 2008 Appeal Panel. The DAA's criticism is in part a consequence of the long lag between the 2007 interim review and the convening of an appeal panel to consider that determination. The Commission accepts that the economic and efficient development of the airport and the ability of the DAA to operate and develop the airport in a sustainable and financially viable manner might both be aided by a shorter lag between determinations and any subsequent adjustment following decisions by courts or appeals panels to refer matters back to the Commission, but when referrals occur the Commission has to consider them on their merits.

8.24 Finally, the Commission has not accepted the DAA's argument that the RAB roll forward should not apply indexation to capex projects occurring in 2009 because the DAA signed nominal contracts prior to the recent

[21] CIP7.025 Central Immigration Pier A & D, DAA 2006 Capital Investment Plan

[22] Page 9, Rogerson, Reddan & Vector "Review of DAA capital expenditure programme" 10 May 2007, www.aviationreg.ie

deflation. The Commission has previously indexed for inflationary changes in the CPI and is not convinced that there is any rationale for an asymmetric approach. It is open for the DAA to contract with suppliers in nominal or real terms and otherwise make arrangements to control its exposure to changes in the price index.

8.25 For reasons outlined earlier (see paragraphs 8.6 and 8.7), the Commission has undertaken the reconciliation exercise grouping projects. It consequently has not accepted the arguments of Ryanair or DACC that its capex allowance for the period 2006-2009 should always be the minimum of allowed or actual spend for each individual project.

8.26 The draft determination included an allowance for Section 49 levies payable by the DAA, subject to the Commission verifying that the payments would fall due by the end of 2009. The DAA response stated that its levy liability is independent of the Metro North project's start date, and that the DAA anticipates discharge of the payment by the end of 2009. Aer Lingus thought that the Section 49 levies fell within the definition of changed circumstances and merited inclusion in the RAB. The Commission has accepted these representations and retained the allowance included in the draft determination. This decision was made after having spoken with Fingal County Council to understand better the DAA's obligations.

Treatment of T1X and T2 capex in the RAB

8.27 For both T1X and T2 capex the Commission has followed an approach consistent with how it indicated it would treat such investments when it made an allowance for these projects in the 2007 interim review. This is also consistent with the approach outlined in the draft determination. Both the DAA and the airlines sought for the Commission to change its approach (in different ways), representations that the Commission has rejected because the Commission believes that the economic and efficient development of the airport is better served by providing some regulatory consistency about how it will consider major investments.

8.28 For T1X the Commission has included the capex in the RAB. At the same time, for the purposes of deriving a price cap it has calculated the return on and return of capital allowed to exactly equal the forecast incremental commercial revenues associated with this project. In the absence of any published incremental revenue forecasts for T1X, the Commission has assumed that the project will generate €5m extra per year. Changing this forecast would not affect the price cap; nor would removing T1X from the RAB, as advocated by DACC and Ryanair, have affected the price cap. The Commission will look at the evidence in 2014 about the extent to which T1X has generated incremental revenues when rolling forward the RAB then.

8.29 For T2, the Commission will allow €635m into the RAB when T2 is operationally ready. This allowance includes, as the Commission indicated it would in the 2007 interim review and the draft determination, capex relating to *T2 associated projects*. The Commission has not accepted the DAA's argument that it should include these latter costs in the RAB immediately and apply straight-line depreciation. Nor has the Commission considered it appropriate to change its treatment of T2 capex now that the investment is spent because of representations from airline users: DACC thought the costs should only be allowed into the RAB if and when passenger numbers reach 25mppa (Ryanair separately suggested 30mppa); DACC also suggested that the Commission should allow no more than 60% of the total T2 related project costs; Aer Lingus claimed that the T2 development is "over-specified and over-priced" and that the terminal is "over-sized", and consequently called for the Commission to make an allowance consistent with an efficiently run terminal of the size "specified as appropriate by the Commission's consultants".[23] The merits of all these arguments are all more appropriately addressed prior to the investment taking place; the 2007 interim review afforded parties such an opportunity and the Commission made a determination then outlining how it intended to treat any subsequent investments relating to the T2 development included in the DAA's 2006 CIP. It was on that basis that the DAA proceeded to undertake the investment. The Commission does not now propose to change its approach given that the DAA cannot "un-invest".

Other adjustments to the starting RAB sought

8.30 DACC proposed that the opening RAB should be reduced because:

- The DAA has sold Great Southern Hotels (GSH), Birmingham and Hamburg airports;
- Pier C is now obsolete; and
- Plans for Dublin airport city will use land currently included in the RAB.

8.31 The Commission has not adjusted the opening RAB for any of these reasons.

8.32 GSH, Birmingham and Hamburg airports have always been excluded from the single till for Dublin airport. The assets were never in the RAB, and the estimated price caps never made any allowance for the operating costs or revenues associated with these assets. Consequently, the Commission does not believe that any adjustment to the RAB is appropriate now that DAA Group has sold the assets.

8.33 DACC (and Ryanair) claimed that pier C costs should be excluded from the RAB in accordance with the Commission's proposed RAB roll-forward principles. DAA responded to this suggestion by claiming that the principles implied the asset should remain in the RAB. The Commission has decided not to adjust the RAB because of pier C's obsolescence. Aside from the DAA's claim that the asset will continue to provide some use after T2 opens, albeit different to what it initially provided, the Commission considers that at the time of the 2007 interim review all parties were aware of the implications for pier C should the T2 project proceed. Scenario 6 of the principles is consequently the most relevant consideration; the decision to allow the T2 investment into the RAB was on

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[23] Page 6, Aer Lingus representation

the basis that it provided a net benefit to users allowing for the fact that pier C would no longer provide contact stands.

8.34 At this stage, there remains uncertainty about both the timing and details of any Dublin airport city project. Given this uncertainty, the Commission has decided not to make a speculative adjustment to the RAB on the assumption that the project will use some lands currently included in the RAB. Should the project proceed and use lands currently included in Dublin airport's asset base, the Commission will make an adjustment to the RAB in accordance with the principles in Annex 3. It will use current, rather than historic, land values if it makes any such adjustment.

8.35 In addition to the above changes to the calculation of the opening RAB, the Commission has also changed the calculation of the 2010-14 depreciation allowance for existing assets (i.e. pre-2009 assets, excluding T2) since the draft determination. There is no change to the methodology used, only the calculation of the final figure.

8.36 In calculating the depreciation allowance for the draft determination the Commission drew on the model developed for the 2007 interim review (provided to users at the time of the interim review). This depreciation allowance inadvertently included an allowance for post-2009 capex which was in-line with the DAA's proposed post-2009 capex spend at the time of the 2007 interim review. This did not affect either the opening RAB or the calculation of the post-2009 capex allowance, only the depreciation calculation for existing assets.

8.37 Given that this 2009 determination includes its own post-2009 capex allowance, with an allowance for return on and return of (depreciation) capital, it would be double-counting to include such an allowance twice. This miscalculation has been amended in the final determination.

Post-2009 capex

8.38 To calculate the annual price caps for the forthcoming Determination, the Commission has assumed that the DAA will spend €189m on capital projects in 2010-2014. It has also allowed for the possibility of the DAA spending up to €320.5m more should various events occur justifying further investment (most notably, should demand growth warrant work commencing on a new runway). These allowances differ to the draft determination, which proposed a capital allowance of €198.1m for non-trigger projects and €337.8m for trigger-projects in the period 2010-2014. The reasons for the difference are:

- The fall in prices since the first quarter of 2009; and
- Changes in the scope or amount allowed for some particular capex groupings.

8.39 Since the draft determination the Commission has observed a fall in the general price level in Ireland. It asked Booz to advise on whether and how their assessment of project costs might change to reflect any change in prices since April 2009. There is uncertainty about the effect of the national and international economic crisis on construction costs over the next couple of years. The Building Cost Information Service (BCIS) index for Q1 2009 was revised down by 3.4% between April and September 2009. As a familiar and reliable source of information, Booz suggested that this would be a conservative reduction to apply to capture the effects of continuing falls in costs since Booz initially reviewed the DAA's capex plans. The Commission revised down all capex allowances by 3.4%, in addition to any other changes described below.

8.40 A large number of respondents (15) to the draft determination commented on the Commission's proposed capex allowance. DACC and the DAA were the only two respondents to the draft to provide detailed comments on all the individual projects in the DAA's CIP and the allowances that the Commission had made for each of them.[24] A number of other parties commented on a few of the projects, typically whether and what costs should be allowed for a new runway. The Commission considers the more detailed arguments below, when it discusses the allowance for each capex grouping in turn.

8.41 The DAA suggested that the allowance was too low, and claimed that the Commission had taken an unbalanced and asymmetric approach when assessing the Booz report by always taking the lower project value. The Commission does not accept that its approach to investment costs was inappropriate. It has reached conclusions about the level of capex required at Dublin airport mindful of its need to protect the reasonable interests of current and prospective users and to permit the efficient and economic development of Dublin airport.

8.42 Forfás, the IDA and most representative bodies that responded to the draft determination – the Irish Tourist Industry Confederation (ITIC), IBEC, Dublin Chamber, Fingal Chamber, IEA, Chambers Ireland, and ITOA – supported the DAA's investment plans. ITIC, for example, argued that the Commission was unwise to cap spend at €200m, particularly given that Booz study of capex unit costs concluded that the DAA appeared to have provided reasonable cost estimates. The Commission believes that this representation neglects the particular remit for the Booz study of looking at the project unit costs in the DAA's CIP; the study did not consider whether the projects met the reasonable needs of current and prospective users. The Commission, in reaching its conclusions about what will be an appropriate level of capex at the airport in the next five years, has considered and formed a view on what investments are needed to meet the reasonable requirements of current and prospective users and also how much it should cost the DAA if such investments are delivered efficiently.

8.43 Two representative bodies less supportive of greater capex were the IHF and DACC. The IHF, like most respondents, did not comment explicitly on the specific investments needs at Dublin airport, but argued for minimal capex in the 2010-14 period to keep prices down. Aside from questioning the costs or need for certain investments, DACC also argued that because assets are indexed in the RAB an allowance for future maintenance capex was unnecessary. The Commission does not accept this argument. The calculations include a depreciation allowance for all capex, including

[24] Aer Lingus and Ryanair stated that their views on capex needs were as in the DACC submission.

maintenance capex. At the end of the assumed asset life, the DAA ceases to receive any remuneration for an investment, including maintenance capex. The Determination would not allow the DAA to operate the airport in a sustainable and financially viable manner if it did not make any provision for the DAA to recover the costs of future maintenance capex.

8.44 As with previous determinations, the Commission has calculated the price cap on the basis that the DAA will recover the costs of investments over a number of years. The Commission has assumed that the €189m of capex will be spread equally over the coming five years for the purposes of estimating a price cap. Both the DAA and DACC criticised this uniform profiling assumption: DACC wanted the capex back-loaded (which would result in lower price cap in the Determination, all else equal) while the DAA wanted it more front-loaded (which would result in a higher price cap). DACC argued the decline in traffic meant that expenditure could be back-loaded. Since much of the capex allowance relates to operational maintenance and upkeep of the airport, the Commission has rejected this representation. The DAA argued that the Commission's assumption did not match its own planned spending programme. Using the start and end dates for projects in the CIP for which the Commission has made an allowance would imply that almost half the total capex occurs in the first two years of the price cap. Only 10% or so of the capex is scheduled to occur in 2014. But experience from previous determinations suggests a considerable difference in the projected and out-turn profile of capex spend. Moreover, in the current economic situation the Commission does not believe the interests of users would be protected if it set a price cap that assumed most of the capex occurs in the early years of the forthcoming Determination.

8.45 For the purposes of estimating a return on and a return of capital, the Commission has estimated an annuity, rather than apply straight-line depreciation. DACC supported this approach, and called for it to be applied retrospectively to assets currently in the RAB that are depreciated on a straight-line basis. It argued that the unitised approach represented a fair division or risk between the DAA and users and rejected the DAA's claim that it contributed towards potential regulatory uncertainty. In contrast, the DAA criticised the Commission's approach to depreciation, arguing that the use of three different approaches (straight-line, annuity and unitisation (tilted annuity)) over-complicates matters. The DAA believed that the use of a single, straight-line approach would be more consistent with the Commission's statutory duties. The Commission rejects the DAA's argument. When presenting its investment plan to users, the DAA used an annuity to illustrate the likely price-cap implications of the project proceeding so this was the information users had when considering the costs and benefits to them of the project proceeding. Moreover, the Commission has previously indicated that it favours a shift towards the use of annuities when estimating depreciation charges. The Commission has not retrospectively applied annuity calculations to assets already in the RAB to avoid a potentially significant, unexpected change in the remuneration profile for past investments.

8.46 The Commission has accepted some of the DAA's concerns about how the annuity charges were calculated in the draft determination. The DAA made three points in this regard:

- The assumed asset lives in the Commission's model do not match the DAA's assumptions;
- Grouping all post-2009 capex and applying a single weighted average asset life unfairly penalises the DAA and leads to a "cliff-edge problem"; and
- The Commission has incorrectly calculated the average asset life for all post-2009 capex.

8.47 For the Determination, the Commission has used published DAA sources to derive appropriate asset life assumptions. Annex 5 provides details on the assumed life for each capex project, along with the source the Commission relied on when assuming this asset life.

8.48 The Commission has also accepted that it is better not to group all post-2009 capex to calculate a single annuity. As the DAA argues, such an approach would run counter to the Commission's stated goal of seeking to ensure smoother pricing profiles. For this Determination, the Commission has estimated annuity charges separately for all allowed investments of a given asset life (retaining in all cases the assumption that the profile of capex is equal across all five years). Given this revised approach to capex, the Commission has assumed a total depreciation charge in the forthcoming five years for new capex of €48m. Should the DAA's total capex in the next five years correspond exactly to the allowance in this Determination, the Commission expects to roll forward €141m of this spend into the RAB used for the purposes of calculating the next determination.

8.49 In the next pages, the Commission sets out how much it has allowed for eight separate capex categories, and what outputs it assumes the DAA will deliver should the DAA invest such a sum. The delivery (or non-delivery) of these outputs will be relevant when the Commission reconciles actual versus allowed capex at the time of the next determination. For each grouping, there is also a discussion of the representations made by DACC and the DAA, the two respondents to make such detailed comments, and the conclusions that the Commission has drawn from these representations. The table below shows the amount of total capex allowed for each grouping, and how this compares to the draft determination. The column for the final Determination includes the adjustment because of the fall in construction prices. Annex 2 provides details on the assumed spend for individual projects and how these lead to a final allowance for the different groupings.

Capex Grouping	Draft	Final
Airport operations	49.0	42.5
Landside infrastructure	23.0	22.2
Piers and terminals	2.4	7.6
Plant and equipment	3.3	3.2
Retail	8.8	10.6
Revenue	19.2	13.9
Stands and airfields	30.3	32.4
Utilities	41.9	37.0
Programme management and contingency	20.3	19.4
Total	**198.1**	**189.0**

Table 8.3: Unconditional capex allowance 2010-14 (€m)

Airport operations

8.50 The Commission has allowed €42.5m for capex relating to airport operations. There is no specific output associated with this allowance, although the Commission expects investments under this heading to maintain fully serviceable airside and landside facilities for the duration of the cap, including airport, police and fire services, and to maintain and upgrade the DAA's corporate IT infrastructure.

8.51 There were three projects in the DAA's CIP that the Commission considered under the *Airport Operations* grouping. The amounts that the Commission proposed allowing for each, as well as the amounts sought by the DAA and DACC in response to the draft determination, are shown in the table below.

	Draft determ.	The DAA	DACC
CIP8.001 Operations	40.0	40.0	20.0
CIP8.008 Corporate IT	9.0	9.0	2.0
CIP2.017 Hangar maintenance		10.2	
Total airport operations	**49.0**	**59.2**	**22.0**

Table 8.4: Views on required capex for airport operations (€m)

8.52 No party disputed the need for spend on operations or corporate IT, although DACC queried the amount allowed. For operations, DACC argued that €4m per annum is sufficient. The Commission's original allowance assumed €7m per annum for ongoing maintenance and a further €1m per annum for T2 operational alterations. The DAA provided data from 2007-

2009 showing that €7m per annum is consistent with recent spend on Operations capex; moreover, the Commission's consultants, Booz & Co, considered that the allowance was in line with data from comparator airports. Consequently, the Commission rejects DACC's arguments for reducing the ongoing maintenance aspect of the operations budget. However, the Commission has accepted DACC's representation that the allowance for T2 alterations possibly represents overspend on the T2 project and should more appropriately be considered at the time of a reconciliation of the overall T2 capex spend rather than making a new allowance now. Booz & Co considered the sum high for a brand new building such as T2. The Commission has allowed €34m for the operations project.

8.53 For corporate IT capex needs, the Commission has rejected DACC's suggestion that €2m would be a more appropriate sum. DACC provided little evidence to support such a change, other than general observations that demand growth will be low and it expects the DAA to lay off workers. The Commission prefers to stick with the conclusions of its consultants who considered the proposed spend by the DAA to be reasonable. The allowance assumes that DAA Group will undertake more corporate IT capex than allowed in this determination; the Commission has only allowed part of the total to be included in calculating price caps to apply at Dublin airport. This approach, consistent with the draft determination, addresses DACC's concern that Dublin airport users should not have to fund DAA Group activities. Based on discussions during the Capex meetings, DACC raised the question of whether there are opex savings associated with the corporate IT project as proposed, and asked whether the Commission has considered this. The Commission reviewed the evidence and is satisfied that corporate IT spend in the last five years has realised opex savings, such as reduced overtime costs because of better rostering. It also believes that the DAA, like most organisations, will need to invest in IT over the next five years and that the opex forecasts implicitly assume normal levels of investment in IT.

8.54 Since the submission of the DAA CIP in March 2009 the hangar maintenance project has evolved significantly in terms of scope, costs and expected revenues. The DAA admitted the possibility of as much at the time, stating that several of the assets in question were still at the early stages of hand-back from previous tenants, and negotiations with potential new tenants were also yet to be finalised. The DAA response to the draft determination requested an allowance for the project of €10.2m (with a cost breakdown for each hanger facility), up from the €4.2m originally requested in the CIP. The DAA indicated an expected total annual rental from the refurbished facilities of €3.3m.[25]

8.55 DACC continued to oppose this capex. In the absence of user support for the project, the Commission has excluded any amount for hangar maintenance from its capex allowance. At the same time, it has adjusted its forecasts for commercial revenues. These changes have resulted in a higher price cap for the period 2010-2014 than would otherwise have been the case. This is consistent with protecting the interests of current and

[25] Page 24, DAA, "Supporting document V: 2010-2014 capital expenditure exclusions", 7 August 2009.

prospective users since not allowing such an investment to enter the RAB means users do not bear the risk that future airport charges will have to be higher should the project prove less commercially attractive than the DAA envisages.

Landside infrastructure

8.56 For *landside infrastructure*, the Commission has allowed €22.2m. This allowance assumes that the DAA will deliver the following outputs:

- A new taxi holding area as specified in the CIP.
- A fully designed and costed GTC facility, should the facility actually be required.
- Fully refurbished existing MSCP as per the CIP
- Roads upgrades and completed perimeter fence as specified in the CIP.

8.57 The table below shows the amounts that the Commission proposed allowing for individual *landside infrastructure* projects in the draft determination, as well as the amounts suggested by the DAA and DACC in response to the draft determination.

	Draft determ.	**The DAA**	**DACC**
CIP3.035 Internal secondary campus roads	5.0	5.0	
CIP3.033 Repairs to departure roads	4.3	4.3	2.5
CIP3.012 Taxi holding area	4.0	4.0	
CIP1.016 Refurbishment of existing MSCP	3.0	3.0	
CIP3.034 External roads upgrade	2.2	2.2	
CIP3.014 Airside/landside perimeter fence	2.0	2.0	1.0
CIP8.300 Metro and GTC design fees	2.0	2.0	
CIP2.008 Maintenance of listed properties	0.5	0.5	0.3
Total landside infrastructure	**23.0**	**23.0**	**3.8**

Table 8.5: Views on required capex for landside infrastructure (€m)

8.58 Aside from the general reduction in costs due to falling prices, the Commission's views on an appropriate capex allowance for *Landside Infrastructure* has not changed since the draft determination.

8.59 DACC's response to the draft determination repeated the position it stated in June 2009.[26] It sought to have only €3.8m allowed for work relating to maintenance of listed properties, the landside perimeter fence and repairs to the departures road. For the other proposed projects, DACC argued that either the current economic circumstances did not warrant them or a business case had not yet been established. DACC opposed outright making an allowance for metro and GTC design fees.

8.60 The Commission remains of the view that generality of airport users will value these projects by more than the amount that they add to the price cap each year. Many of the projects included under this heading affect passengers and other non-airline users of the airport more directly than they affect the airlines, e.g. road works, the taxi holding area or the multi-storey car-park upgrades. The Commission believes that for these projects the available documents from the DAA set out clearly the scope and motivation for the projects.[27] For these reasons, the Commission has rejected DACC's representation seeking a large reduction in the capex allowance for *Landside Infrastructure.* The final allowance for Landside infrastructure projects, taking account of construction deflation of -3.4% is €22.2m.

Piers and terminals

8.61 For *pier and terminals*, the Commission has allowed €7.6m. For this allowance, the Commission expects the DAA to deliver

- a new, upgraded fire-alarm system for T1, including a new emergency lighting system.

8.62 The table below shows the projects in the CIP included within the *piers and terminals* grouping, along with the allowance made in the draft determination and the amounts sought by the DAA and DACC in response.

	Draft determ.	The DAA	DACC
CIP7.032 T1 pax processing enhancements		4.0	
CIP7.035 Pier B connectivity		11.0	
CIP7.036 T1 life safety system upgrade	2.4	5.0	2.4
Total piers and terminals	**2.4**	**20.0**	**2.4**

Table 8.6: Views on required capex for piers and terminals (€m)

8.63 Despite the DAA's representations, the Commission has not made no additional allowance for capex to enhance T1 passenger processing or for pier B connectivity. For the former project, there remains an absence of user support for the project, despite the DAA's revised proposals. In

[26] Page 104, DAA response to draft determination.
[27] See pages 39, 92-94 and 114-124, DAA, *Capital investment programme 2010-2014,* February 2009.

response to the draft determination, the DAA proposed a revised project costing €4m rather than the original €16m in the March 2009 CIP. DACC opposed the new proposals, arguing that they would be detrimental to service quality at the airport, mainly in terms of increased passenger walking distances. It claimed that the link was indicated in the original plans for T2. The Commission considers the pier B connectivity project to be part of the overall T2 project, costs of which fall to be considered in 2014 when the Commission proposes to undertake a reconciliation exercise of allowed versus out-turn capex for this project. Consequently, it has made no additional allowance for such a project in this Determination.

8.64 For the T1 Life Safety System Upgrade, the Commission has increased the allowance to €7.9m. This is more than the DAA originally sought. The increase reflects Booz's revised estimates for the costs given more recent information from the DAA on the project specification. The DAA responded to the draft determination arguing that Booz had ignored important costs in their initial analysis. The Commission invited Booz to revisit its estimate given this representation. On the basis of additional information provided by the DAA, Booz noted that the project specification now differed to what was given to them earlier in the year and that their cost estimate based on the new information was now higher than the DAA's initial estimates. The Commission has accepted in this instance the revised estimates, since the DAA had previously indicated that it was still finalising the exact work required for this project. It has allowed €7.6m for this project.

Plant and equipment

8.65 For *plant and equipment*, the Commission has allowed €3.2m. For this allowance, the Commission expects the DAA to deliver

- a new 2-3MW CHP plant at Dublin airport.

8.66 Both the DAA and DACC supported the Commission's draft determination capex proposals for *plant and equipment.* The DAA questioned how the Commission had treated this project for the purposes of setting an opex allowance. This point is addressed in chapter six.

Retail

8.67 For *retail* capex, the Commission has allowed €10.6m. There are no specific outputs associated with this allowance, which covers any retail refurbishments that the DAA may undertake in the next five years.

8.68 The table below shows what was allowed in the draft determination, and the amounts sought by DACC and the DAA in their responses.

	Draft determ.	The DAA	DACC
CIP5.013 Retail refurbishments	8.8	16.8	
Total retail	**8.8**	**16.8**	**0**

Table 8.7: Views on required capex for retail (€m)

8.69 The Commission continues to believe that it is appropriate to make some allowance for retail refurbishment, notwithstanding DACC's suggestion that there should be no allowance given the Commission was forecasting falling or steady retail revenues in the forthcoming regulatory period. Absent any investment in retail refurbishment, the Commission would require users to pay higher airport charges because it believes that there would be an even more significant decline in commercial revenues.

8.70 The DAA claimed that the Commission's proposed allowance was insufficient to realise the forecast commercial revenues. It argued that the Commission's allowance was not consistent with allowances for previous regulatory periods. The DAA claimed that the allowance for the period 2006-2009 was €10.6m in 2006 prices, although it is unclear to the Commission whether this figure refers to the regulatory allowance for capex following the 2007 interim review, or the DAA's own CIP figures. [28] In the 2007 interim review, the Commission allowed €8.2m (€8.4m in 2009 prices) for the following projects: *Pier B travel value refurbishment*, *Retail Refurbishments, Street Intersection, Perfumery Revamp* and *Retail – local projects*. The description of all of these projects in the 2006 DAA CIP is broadly similar to the description for CIP5.013 in the 2009 CIP. The Commission has used this figure as the basis for the proposed allowance for retail refurbishment for the 2010-14 period.

8.71 Because the forthcoming regulatory period is five years, while 2006-2009 covered a four-year period, the Commission has accepted that it should increase its capex allowance for retail refurbishment by 25%, a change suggested by the DAA. The DAA also argued that the addition of new facilities (piers D and E, T1X and T2) meant that the allowance should be higher as such facilities did not exist when the allowance was set for the 2006-09 period. The Commission has not accepted that this argument should result in an increase in its allowance for retail refurbishment, since it makes no corresponding reduction in the allowance to account for pier C being subsumed into T2 and the Commission is not convinced that the DAA should necessarily need to invest significant amounts in the next five years refurbishing a range of brand-new facilities.

8.72 In summary, the Commission has allowed €10.6m. This is more than in the draft determination because the Commission has concluded that its original proposals for retail refurbishment capex were more suitable for a determination lasting four years rather than five years. The Commission is satisfied that its allowance is consistent with an assumption that commercial revenues at the airport for the next five years evolve in a

[28] Page 29, "Supporting document V: 2010-2014 capital expenditure exclusions", DAA representation.

manner consistent with recent past: there is no need to assume any step change up or down in commercial revenues because of the capex allowance.

Revenue

8.73 For *revenue projects,* the Commission has allowed €13.9m. This allowance assumes that the DAA will deliver the following outputs:

- the cargo facilities set out in the CIP2009, but without the cargo distribution centre; and
- a retail logistics centre

8.74 The allowance also assumes that the DAA will undertake some general investment upgrading various accommodation facilities.

8.75 The table below shows the amounts that the Commission proposed allowing for individual *landside revenue* projects in the draft determination, as well the amounts proposed by the DAA and DACC in response.

	Draft determ.	**The DAA**	**DACC**
CIP1.006 MSCP		40.5	
CIP2.018 Cargo works	13.1	8.3	
CIP2.015 DAA tenant accommodation		5.0	
CIP2.019 Retail logistics centre	3.1	3.1	
CIP2.016 DAA tenant accommodation – piers GSH	3.0	3.0	
CIP2.014 DAA office accommodation		2.5	
Total revenue	**19.2**	**62.4**	**0.0**

Table 8.8: Views on required capex for revenue (€m)

8.76 The Commission has retained its proposal not to make any allowance for a multi-storey car park (MSCP). The DAA argued that its proposal to spend €40.5m on an MSCP was justified as:

- it would deliver excellent returns, having a neutral impact on charges up to 2014 and contributing to a net increase to the single till from 2014 onwards;
- without the new MSCP, the T2 customer experience will be poorer; and
- commercial projects of this nature are essential to Dublin airport's development and ensure long-term revenues for the airport.

8.77 The Commission accepts that the customer experience of T2 will be better if a dedicated T2 short-term car park is available. But the DAA already has an allowance for such a facility, since the interim review allowed €29m into the RAB as part of the overall T2 capex allowance, some of which the DAA already reports having spent. The Commission does not propose to revisit this capex allowance until the 2014 determination when it will reconcile out-turn and actual capex for the T2 project. Since there is an allowance for a T2 car park, the Commission also does not accept that it needs to revise its forecast car-park revenues in its chapter on commercial revenues.

8.78 The DAA has re-worked the scope of the cargo works project (CIP2.018) to exclude the cargo distribution centre. The Commission has revised its allowance for this project to reflect the revised proposals, which the Commission believes represent a more efficient and economic development of the airport. The project appears to meet the reasonable requirements of cargo users at the airport. The capex allowance in calculations used to make this Determination includes €8m for the revised cargo works project.

8.79 For tenant and office accommodation investments, the Commission was not persuaded by representations to change its allowance. The DAA argued that its commercial revenues would be considerably lower if it only spent this sum on such projects. It expected ramp occupancy rates to increase significantly in the future as it removes temporary accommodation associated with the "Transformation Programme". This includes the TBG and the South Apron Village. The DAA wrote to airlines after the draft determination to indicate that it intended closing the TBG at the end of October 2009. DACC has advised the Commission that all its members opposed the closure and removal of the TBG, arguing that it removed a facility that users found useful. The Commission has responded that it does not have the power to intervene directly in how the DAA operates Dublin airport. Nevertheless, the Commission is reluctant to allow additional capex allowances justified in part by the closure of existing facilities that users found useful. Nor is the Commission convinced that the DAA's ability to maintain existing commercial revenues requires more than the Commission has allowed.

Stands and airfields

8.80 For *stands and airfields,* the Commission has allowed €32.4m. This allowance assumes that the DAA will deliver the following outputs:

- an overlaid runway 10/28;
- a reconstructed central apron area;
- a reconstructed apron road;
- planning permission for a new runway and engine-testing facility, with evidence that the planning permission sought is for facilities that meet the reasonable requirements of prospective users;
- a new airfield generator; and

- a re-instated runway 11/29 (length 1,339m) for the use of category A and B aircraft.

8.81 The table below shows the amounts that the Commission proposed allowing for individual *stands and airfield* projects in the draft determination, as well the amounts proposed by the DAA and DACC in response.

Project	**Draft determ.**	**The DAA**	**DACC**
CIP6.017 Overlay runway 10/28	7.0	7.0	7.0
CIP6.052 Central apron reconstruction	13.8	15.0	9.0
CIP6.054 Taxiway C L lights and associated stop bars on runway 16/34		6.3	
CIP6.018 North runway fees	4.2	4.2	
CIP6.055 B7 taxiway overlay	2.8	3.0	0.8
CIP6.056 Apron road reconstruction	1.8	1.8	0.5
CIP6.057 Airfield generator replacement	0.5	0.5	0.5
CIP6.009 Engine testing facilities fee only	0.2	0.4	
Runway 11/29 refurbishment			4.5
Total stands and airfield	**30.3**	**38.2**	**22.3**

Table 8.9: Views on required capex for stands and airfield (€m)

8.82 DACC supported and the DAA reluctantly agreed with the Commission's proposed capex allowance for overlaying runway 10/28 and replacing the airfield generator. The Commission has retained its approach, subject to a general reduction on all capex allowances to account for falling prices. It has allowed €6.8m for the overlaying of runway 10/28.

8.83 Booz & Co advised the Commission that the central apron reconstruction project should cost €13.8m. The DAA provided additional information on this project in its response to the draft determination, particularly on the full extent of air ground lighting (AGL) works required. On the basis of this additional information, Booz has increased its estimate for the cost of this project to €14.55m (prior to applying an adjustment for the general fall in construction prices in 2009). Booz's assessment is contained as an appendix to this report. The Commission has consequently increased its allowance for this work. DACC argued that phasing the work could mean a lower allowance of €9m, but its submission did not further substantiate this claim; the Commission has decided instead to take the advice of its consultants, who assessed the costs in more detail.

8.84 The Commission has continued to exclude any allowance for a taxiway CL lights and associated stop bars project. The DAA argued it was needed to improve airfield safety and efficiency. The Commission accepts this point, but has still chosen not to make an allowance for the next five years, given the users best placed to advise on the need for this project, the airlines, do not support such an investment occurring in the next five years. DACC acknowledged that the project was desirable in the long run, but that at the present time it was not essential and should be deferred to protect the interests of users by keeping costs, and consequently airport charges, to a minimum.

8.85 DACC suggested that expenditure on north runway fees should be included in an overall trigger for new runway costs. The Commission has rejected this argument since it thinks the efficient and economic development of the airport will be better served by the DAA investing some money into examining option and developing plans for a new runway. The Commission has a similar view with regard to the need for capex for engine testing facility fees.

8.86 The Commission has only allowed €0.8m for B7 taxiway overlay project. This is lower than the allowance in the draft determination, although it has not had any effect on the price cap. The change was made following the representation made by DACC. At the post 2009 capex meeting on 29 May 2009, the DAA described a number of options and indicated that the €3m and €0.8m options had similar implications for per passenger charges. In the draft determination, the Commission allowed the more expensive but durable option costing €3m. DACC, representing users most directly affected by this investment, the airlines, indicated it favours the rolling programme of slab replacement outlined by the DAA, the option costing €0.8m.

8.87 DACC called for an allowance of €0.5m for the apron-road reconstruction, compared to the draft determination's allowance of €1.5m. It thought that the DAA has not established the case for reconstructing the entire road during the 2010-2014 period. The DAA argued that piecemeal refurbishment, as seemingly advocated by DACC, was no longer sufficient to ensure continuous safe use of the road over the coming years. The Commission has accepted the DAA's arguments that CIP estimates for this work should be included in the capex allowance.

8.88 Finally, the Commission has made an additional capex allowance for *stands and airfields,* following a request from the DACC, to allow €4.5m to refurbish runway 11/29. DACC considered this to be a cost-effective means of providing additional runway capacity at the airport. The DAA responded to this representation with some observations on whether the project was actually feasible for this sum. Should the DAA decide not to proceed with the project, possibly for reasons outlined in its representations, then the Commission will claw back the sum from the RAB at the time of the next determination. The DAA should only proceed with the works if it is satisfied that they will have no implications for the costs of building a parallel runway at a later date or if users continue to support the project when made aware of the consequential implications for the costs of later building a parallel runway.

Utilities

8.89 The Commission has allowed €37m for utilities works. The specific outputs that the DAA is expected to provide for capex under this heading are:

- Two new 5,000m^3 tanks in the fuel farm
- Completion of all drainage and pollution works as per CIP 2009
- Fully upgraded and renewed airport-wide MV network

8.90 In arriving at an allowance for this capex grouping, the Commission has updated its allowance to reflect the views of the airlines regarding the need for a fuel-farm redevelopment. The table below shows what the Commission proposed to allow at the time of the draft determination, and the amounts that the DAA and DACC thought should be allowed in their responses to the draft.

	Draft determ.	**The DAA**	**DACC**
CIP9.024 Fuel farm redevelopment	17.9	20.4	12.0
CIP9.019 Divert and increase cuckoo culvert capacity	11.0	11.0	7.4
CIP9.022 Airfield pollution control	7.5	7.5	
CIP9.021 Airfield drainage upgrade (3km)	3.0	3.0	
CIP9.020 MV network renewal works A	2.5	2.5	
Total utilities	**41.9**	**44.4**	**19.4**

Table 8.10: Views on required capex for utilities (€m)

8.91 For the *Fuel Farm Redevelopment* project, DACC only wants two new fuel tanks, and proposes a reduction of €6m in the allowance accordingly. DAA claims that if the into-plane facility is not to be built, then the allowance must include an additional €2.5m for a new fuel loading facility. At the meeting to discuss this project on 6 May 2009, the DAA outlined clearly the risks to airlines (DACC) from having one, two or three additional tanks installed. In calling for only two tanks in this facility, the airlines implicitly accepted the associated security of supply risks. The DAA indicated early in the discussions that if the into-plane facility was not to go ahead, there would be incremental costs associated with having the fuel loading facility on the current fuel farm site, an argument accepted by the Commission. The Commission proposes a final allowance for this project that assumes cost savings from building one less tank, but with additional costs associated with the fuel-loading facility.

8.92 Despite the DACC submission on drainage and pollution control works, the Commission supports such work taking place and has retained its proposed capex allowance for this work. As noted in the draft determination, Booz & Co found the DAA's costing for these projects to be reasonable. DACC's responses to the CIP seemed to acknowledge the need for the work, despite a reluctance to meet the costs (between €0.03 and €0.04 per passenger on the annual price cap) because of the current economic downturn.

8.93 The *MV Renewal Works* project is part of a larger airport-wide project to upgrade the airport owned and operated medium-voltage network. The works are also partially justified by the mooted new air traffic control tower. For these reasons, the Commission has decided not to accept DACC's suggestion that it allow nothing for this project.

Programme contingency and programme management

8.94 The Commission has allowed €19.4m for programme management and programme contingency.

8.95 The table below shows the draft determination proposals, and the amounts suggested by the DAA and DACC in their responses.

	Draft determ.	The DAA	DACC
Programme contingency	15.8	27.0	1.5
Programme management	4.5	25.0	
"5% contingency reduction"			(3.4)
Total programme management and contingency	**20.3**	**52.0**	**(1.9)**

Table 8.11: Views on required capex for programme management and contingency (€m)

8.96 The amount allowed for programme contingency and programme management has been arrived at as a function of the total capex allowed for other projects. As in the draft determination, the Commission has allowed programme contingency costs equal to 8.9% of allowed capex for non-trigger projects. Given that the total capex allowed is slightly lower than in the draft determination, the amount allowed for programme contingency is lower (about €15m).

8.97 DACC did not accept that it was reasonable to allow programme contingency costs given that there were already project contingency costs allowed for each individual project. Moreover, it felt the project contingency costs were too high, and suggested that the overall capex allowance should be further reduced by €3.4m for this reason. The Commission has not accepted this representation. It believes that it is important to allow for some (limited) flexibility in the overall capex programme to account for currently unidentified factors that might affect the overall investment programme. More generally, the Commission believes that DACC's proposed allowance of 2% of total allowed capex to cover overall programme management and contingency costs is insufficient. Instead, the Commission has retained the approach it used in the draft determination to arrive at suitable allowances for programme management and contingency costs.

8.98 For programme management costs, the DAA claimed that the Commission had ignored the need for *project* management costs in its allowance. This was why the Commission's proposed allowance in the draft determination was much less than the amount for programme management included in the DAA's CIP. The Commission has reviewed this point and concluded that it does not warrant a change. Its consultants Booz & Co have confirmed that their analysis of individual projects assumed that project management costs were included in the total allowed for each project. If the Commission were to increase the amount allowed for programme management to account for project management fees, it would make an offsetting adjustment to the amount allowed for each of the individual projects.

Trigger projects

8.99 In addition to the capex allowances outlined above, the Commission has identified certain circumstances where it will allow additional capex. These "trigger projects" are outlined in the table below. The table describes the event that would prompt the Commission to include additional capex in the RAB, the projects that it would expect the DAA to undertake should the event occur, and the amount that the Commission would allow. All of these triggers and allowances only apply for the period 2010-2014. Should the trigger event not occur in this period, the Commission will consider afresh when making the next Determination whether and what capex allowance to make for these projects.

Trigger	**Projects**	**Amount (€m) Final Det.**
Passenger traffic exceeds 23.5mppa over a 12-month period	North runway construction works, house buy-out, engine testing facility, new pier design, control tower facilitation (CIP 6.051, 6.019, 6.053, 7.018, 2.009)	€288.2
Stand availability in the peak week exceeds 74 stands	New apron development (CIP6.047)	€21.9
Legislation passed requiring baggage security equipment upgrade prior to 2015	Upgrade HBS (CIP4.017)	€10.4
Total trigger capex		**€320.5**

Table 8.12: Trigger projects as proposed in the draft determination

8.100 The Commission has made a number of changes since the draft determination. First, the allowable capex for each project has been revised down because of falls in the construction prices since the first quarter of 2009. This is consistent with the adjustments made to the capex allowances for projects where no trigger applies.

8.101 The trigger before the Commission will remunerate work on a new apron development has been redefined, although the Commission's general philosophy is unchanged. The Commission will now only allow capex for this work if demand for the stands exceeds 74. Previously, the allowance referred to surplus stand availability being less than 10 in the peak week. This latter definition left open the possibility that the DAA could reduce the supply of stands to trigger the need for additional capex even in the absence of any increased demand at the airport. Given the concerns expressed by airlines about the DAA's motivations for closing the TBG, the Commission has redefined its trigger for when it will make an allowance to fund new apron development works to reduce any alleged incentives the DAA may have to de-commission existing facilities merely to justify new investment.

8.102 For the hold-baggage screening, the Commission has included the full allowance sought by the DAA (subject to the same trigger). The DAA has confirmed that it would be possible to move existing screens from Area 14, but whether this would be an economical option is currently uncertain. Rather than seek a costing for such an exercise now, the Commission instead proposes to allow a sum sufficient for the DAA to undertake the full upgrade without moving existing facilities should the work be required. If such work is undertaken, the Commission will look for evidence when reconciling capex spend that the DAA consulted with users, only upgraded the minimum number of screens necessary and was justified in any decision to re-locate or not re-locate existing equipment.

8.103 The Determination does not include any allowance for work on a fuel hydrant for Pier E. DACC has stated that the project does not meet the requirements of airlines users. Since this is the group of users that the project is designed to benefit, the Commission has decided not to make any allowance.

8.104 The Commission has rejected DACC's argument that all the trigger projects are not specified satisfactorily and consequently it is inappropriate to propose any trigger-related additions to the RAB. The Commission is satisfied that it has allowed a suitable amount for further investments that may be needed at the airport if certain events occur; it does not need to identify precise project specifications to arrive at a suitable cost allowance for such works. By indicating its allowance, the Commission is protecting the interests of users by specifying a budget constraint for the DAA to observe while developing specific investment plans. Moreover, the Commission is wary that the efficient and economic development of the airport will be hampered if the DAA is uncertain, even after a trigger event occurs, about whether allowances for resulting investments will be remunerated.

8.105 The proposals for the second runway attracted responses from more than just the DAA and DACC. The comments related both to the amount allowed and the proposed trigger. A number of parties stated their support for a new runway at Dublin airport, and argued that this new capacity was required to open the airport up to services from more long-haul destinations, in particular potential future trading partners in Asia. Such demands are consistent with the government policy outlined in the Ministerial Direction that the Commission received subsequently. Some parties argued that there was a wider economic benefit to the country as a whole from providing such facilities. Some also argued that consumers would benefit from increased competition with the arrival of new services.

8.106 DACC suggested that reinstating runway 11/29 might be a more efficient and economic development to provide additional runway capacity. While the Commission has made an unconditional allowance for this project to proceed in the near future, it does not believe that this represents a long-term solution to possible runway capacity constraints at the airport. Nor does it believe that such an option would be consistent with complying with the Ministerial Direction. Consequently, it has not been persuaded to remove an allowance for the costs of building a new runway should demand grow more rapidly than forecast.

8.107 The DAA, Angela Lawton and UPROAR questioned the 23.5mppa trigger for the new runway. Angela Lawton referred to the DAA's December 2004 application for planning permission which stated that the existing runway has a capacity of 28mppa. UPROAR suggested that the existing runway's capacity must be around 30mppa. To support this view, it cited various quotes attributed to DAA staff about capacity, as well as a reference to the capacity at Dublin airport in an Indecon report, *Economic Development Strategy for the Metro North Economic Corridor*. The Commission accepts that the existing runway may be able to handle more than 23.5mppa, but considers it prudent to set a trigger lower than the absolute capacity of the existing runway to allow the time for the DAA to commission and build a new runway before this capacity is reached. Moreover, the threshold is set to allow for the possibility of more rapid growth than currently forecast.

8.108 The Commission has clarified that the runway allowance will only enter the RAB if passenger numbers exceed 23.5 million in a 12-month period before the end of 2014. This addresses DACC's concerns about the suitability of the trigger for later years.

8.109 The DAA requested that the Commission provide greater clarity around the precise definition of the runway trigger. In particular it thought that if the proposed passenger throughput trigger is used, it should refer to any 12 month period, and not necessarily be linked only to demand in a calendar year. The Commission has accepted this representation, and defined the trigger such that it relates to any consecutive 12-month period and not just a calendar year.

Cost of capital

8.110 The Commission has allowed a real rate of return of 7% on sums included in the RAB for the purposes of making this Determination. This is the same as the Commission proposed in the draft determination. It is the Commission's estimate of an appropriate real, pre-tax cost of capital. The Commission has estimated this cost of capital using the same approach as in the draft determination, i.e. the weighted average cost of capital (WACC) using the capital asset pricing model (CAPM) to estimate the cost of equity. This approach is generally consistent with the approach that its consultants have taken previously when advising the Commission on the cost of capital, both for previous determinations governing airport charges and for determinations setting a cap on aviation terminal service charges set by the IAA.

8.111 To reach its final conclusions about the cost of capital, the Commission has considered the representations it received and also more recent developments in the financial markets. At the time of the draft determination, the Commission indicated that it would monitor the financial markets between the time of the draft and final determinations.

8.112 Most of the representations received focussed on how the Commission had arrived at an estimate of 7% for a pre-tax, real cost of capital. The only representation that might have warranted a totally different approach was from Ryanair. It argued that the DAA benefits from the fact that in inflationary periods the present-day value of fixed nominal debt reduces. Ryanair suggested that the Commission's approach to indexing the RAB and applying a rate of return needed to change to correct for this problem. These arguments relate to Ryanair's comments about a "debt inflation shield", discussed in Annex 4. The DAA responded to this representation of Ryanair, claiming that Ryanair neglected to mention that when securing loans with nominal interest rates, the interest rate negotiated includes an allowance for the impact of rising price levels on the real value of the loan.

8.113 The Commission agrees with the DAA that the implications for the cost of capital will clearly depend on whether the return sought is expressed in real or nominal terms. Since it sets the price cap in real terms, the Commission believes it is more appropriate to estimate the various components leading to the final price cap in real terms. Hence, it indexes the RAB to the CIP, and allows a real return on that capital. It is for the DAA ultimately to decide whether to structure its finances with debt or capital, and whether to issue any debt in real or nominal terms. There is considerable uncertainty about what represents an appropriate cost of capital, with many of the individual components in the calculation not directly observable. The Commission considers the pre-tax real cost of capital that it allows as a return for capital contained within the RAB to be a reasonable estimate, not requiring further adjustment for any debt-inflation shield.

8.114 The IEA acknowledged "the reality of quoting 7% as the potential cost of funds".[29] Other parties suggested that the estimate in the draft determination was either too high or too low.

8.115 The DAA argued for a higher cost of capital. It contrasted the 7% proposed by the Commission in its draft determination with the cost of capital used in the 2005 determination (7.4%), and with the earlier estimates provided by NERA, consultants who had produced a report for the DAA in March 2009 recommending a value in the range 8.0-9.4%. In response to the draft determination, NERA found the reduction in the WACC to be implausible given the financial crisis which it viewed as

[29] Page 3, IEA's response to the draft determination.

leading to a significant and non-transitory increase in market volatility and increased risk perception.

8.116 A number of submissions by users representing airlines argued for a lower estimate of the cost of capital. bmi asked the Commission to consider revising down its estimate. IATA recognised the considerable volatility in the financial markets but questioned the selection by the Commission of a point estimate at the top end of the range of estimates. It compared the DAA's cost of capital with Gatwick airport, for which the CAA assumed a cost of capital of 6.5%.

8.117 One source of the differences between parties was the weight to attach to current market conditions. The DAA argued that the Commission had not placed enough weight on current evidence, while DACC and Aer Lingus thought that the Commission should focus on medium to long-term trends and not attach undue weight to recent financial market conditions (a view criticised by the DAA in its response to other parties' representations). Since the draft determination, the Commission believes that conditions in the financial markets have improved. The relative importance of deciding whether to rely on estimates based on current market conditions or long-term averages has declined.

8.118 To arrive at the 7% real, pre-tax cost of capital, the Commission has assumed the same point estimates for the various elements involved in a WACC-CAPM calculation as those presented in the draft determination. These estimates are re-produced in the table below. The Commission continues to believe that these point estimates fall within a reasonable range of possible estimates. Based on the representations received and more recent data, there may be a case for revising down the range of suitable values for the cost of debt and revising up the range of values for the asset beta but the point estimates remain valid estimates. The Commission does not believe in either case would such a change require changing its point estimate; since the effects have opposite implications for the overall real, pre-tax cost of capital estimate, the Commission has decided to stick with its original estimate. The rest of this section discusses the arguments made relating to each of the components used to estimate a real, pre-tax cost of capital.

	Draft determination		Final determination
	Range	Point	
Real risk free rate	1.5-2.5	2.5	2.5
Equity-risk premium	4.0-5.0	5.0	5.0
Asset beta	0.5-0.7	0.61	0.61
Real cost of equity (pre-tax)		9.9	9.9
Real cost of debt (pre-tax)	3.5-4.5	4.1	4.1
Gearing	37-50	50	50
Real WACC (pre-tax) (%)		7.0	7.0

Table 8.13: Values of components of the weighted average cost of capital

Forward looking risk-free rate

8.119 The risk-free rate represents the interest that can be obtained by investing in financial instruments with no default risk. In the absence of direct evidence on the risk-free rate, the Commission looked at the yields on assets typically viewed as safe, including German ten-year government bonds. Yield data on such assets since the determination do not provide a strong reason to change the point estimate of 2.5%.

8.120 The DAA offered two arguments for increasing the assumed risk-free rate. First, it claimed that developments in the financial markets since 2005 pointed to a higher risk-free rate whereas the Commission's proposal actually meant the risk-free rate was now 40 basis points lower than in 2005. The Commission does not accept that the evidence requires a higher risk-free rate in 2009 than in 2005. In that period, yields on nominal German ten-year bonds have fallen. It is not clear that expectations about inflation have necessarily fallen by more – the ECB has the same inflation target as before.

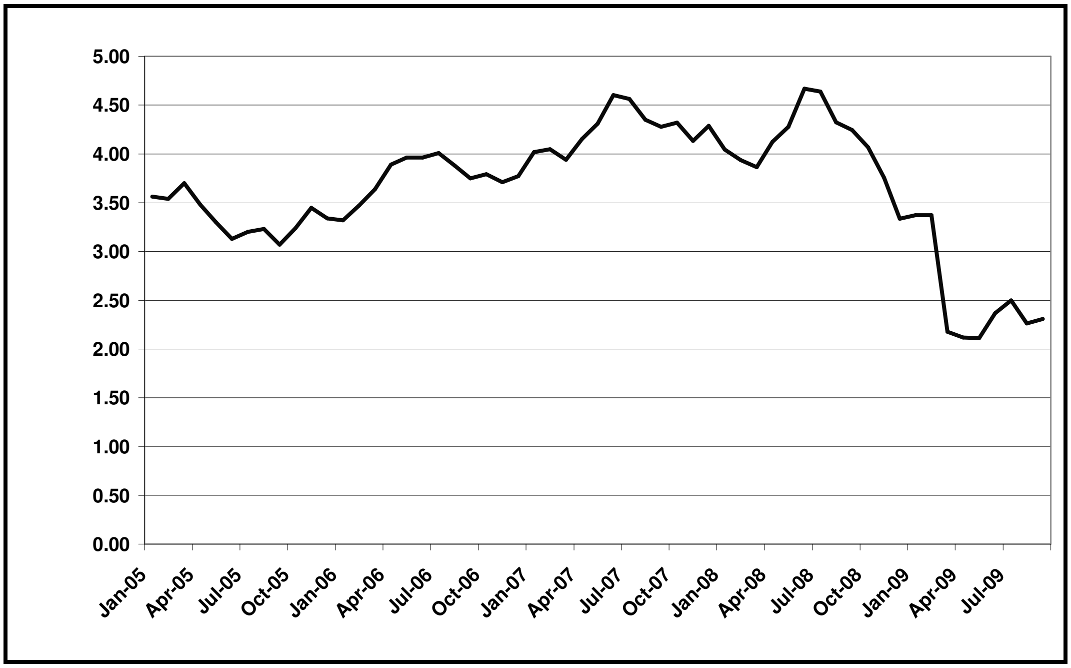

Figure 8.2: Yields on German nominal 10-year bonds from January 2005 to September 2009 (%)

Source: Eurostat and Reuters

8.121 Second, the DAA suggested adding a sovereign risk-premium of 1.4-1.5% to the risk-free rate to account for Ireland's credit rating downgrade. It argued that investors cannot fully diversify their exposure to Ireland-specific risks. The existence of home bias and other market segmentation required the risk-free rate to be increased to compensate domestic investors for not diversifying the risk of investing in Ireland. The DAA cited various academics who have advocated including country-risk premiums in the risk-free rate.

8.122 The Commission has rejected this representation, and not adjusted the risk-free rate for any country-specific risk. The risk-free rate is only used in the Commission's calculations of the cost of equity, and the Commission prefers to consider the impact, if any, of Irish country risk when determining the risk premium to allow, rather than adjusting the risk-free rate. The DAA's Irish base was a factor that the Commission considered when determining the asset beta in the draft determination.

8.123 The Commission has assumed a real risk-free rate of 2.5% for the 2010 to 2014 regulatory period.

Equity risk premium

8.124 In the draft determination the Commission assumed an equity-risk premium of 5%. This was based on evidence of the historical equity mean returns relative to bonds from the Credit Suisse Global Investment Returns Sourcebook 2009, academic studies, and other regulatory decisions in Ireland and the UK.

8.125 Ryanair did not consider it appropriate for the Commission to compare its decisions against any regulatory decisions in the UK or Ireland as the competition authorities operating in that jurisdiction have discredited the regulatory approach. The Commission does not believe that this representation requires it to change its estimate of the equity-risk premium. It did not rely on a single source for information. It even had regard to past decisions of the UK Competition Commission that refer to the equity-risk premium. The Commission is certainly not aware of any evidence to support an equity-risk premium of zero, as advocated in Ryanair's written submission (although in its meeting with the Commission, Ryanair gave the impression that its arguments were more related to a judgement about the appropriate asset beta to assume).

8.126 IATA suggested that the Commission's estimate in the draft determination of 5% was too high. It compared it with the CAA's estimate of 4.5% in its determination for Gatwick airport charges, a figure that was at the top of the CAA's estimated range.

8.127 The DAA stated that the Commission's proposal in the draft determination to assume a lower equity-risk premium than the 6% assumed in its 2005 determination was inappropriate given the recent upheaval in the financial markets. It claimed that the Commission's reference to historical data reported in the Credit Suisse Global Investment Returns Sourcebook 2009 is not appropriate at the current time since the world's financial markets are currently experiencing acute stress. The DAA referred to evidence that the current equity-risk premium is higher than long run historical levels. The evidence included results from dividend-growth models, data from call options on the implied market volatility of the Eurostoxx 50, the premiums of credit-default swap (CDS) indices, debt spreads adjusted for liquidity premia and statements from the ECB.

8.128 The Commission has rejected the DAA's arguments that the equity-risk premium should be higher. The equity-risk premium the Commission has assumed is the same as the one it used in 2007 when making a determination governing aviation terminal service charges that the IAA may levy. Recent academic studies, published after the financial upheaval began, have suggested an equity-risk premium in the range identified by the Commission.[30]

8.129 Updating some of the short-term evidence that the DAA cited in support of a higher equity-risk premium in August 2009 would not always support such a high premium today. For example, the DAA's consultants, NERA, referred to ECB evidence on high volatility in the markets. The ECB's monthly bulletin in October 2009 points to a reduction in volatility in the markets. Looking at the implied stock market volatility in the Euro area, the US and Japan, the ECB found that short term stock market uncertainty has returned to the levels prevailing prior to the intensification of the financial crisis in September 2008. The Commission accepts that there may be variations in the estimates of the equity-risk premium depending on the time period studied or the source of the underlying date – the ECB

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[30] See, for example, J Bradford DeLong and Konstantin Magin, "The U.S. equity return premium: past, present and future". *The Journal of Economic Perspectives*, Winter 2009, Volume 23(1); Bianca de Paoli and Pawel Zabczyk, "Why do risk premia vary over time? A theoretical investigation under habit formation", Bank of England working paper no 361, February 2009; and John R Graham and Campbell R Harvey, "The equity risk premium amid a global financial crisis", May 2009.

study found that stock-market volatility remains significantly higher than before the onset of the credit market turmoil in mid-2007 – but thinks that this points to the benefit of taking a balanced view of the evidence rather than focussing on evidence covering only short time horizons.

8.130 The Credit Suisse Global Investment Returns Handbook states that its evidence shows that

> *"it is hard to improve on extrapolation from the longest history that is available at the time the forecast is being made"*[31]

8.131 In November 2008, the ECB published an article "Valuing stock markets and the equity risk premium". It tested three measures of the equity-risk premium – an inter-temporal capital asset pricing model (ICAPM), a dividend discount model and a measure of the ten-year average of the ex-post ERP. It noted that all estimates are surrounded by a large degree of uncertainty. Over the sample period from January 1990 to October 2008, the unconditional mean of the ICAPM, the mean of the premium from the three stage dividend discount model and the simple moving average of realised returns were 6%, 3% and 5% respectively. The article presented theoretical research on stock-price bubbles and insights from behavioural finance showing that, on occasions, stock prices can drift to levels beyond those consistent with an appropriate valuation.

8.132 For these reasons, the Commission does not believe it should rely solely on evidence from recent studies focussed on short-term fluctuations in the equity-risk premium. The Commission also notes that DAA's latest set of accounts (2008) assume a long-term return on equities and bonds of 8.5% and 4.0% respectively, a difference of 4.5%; since 2004 the average premium assumed from holding equities rather than bonds in valuing the DAA's pensions is 4%.[32]

8.133 The Commission has rejected IATA's suggestion that it select a lower equity-risk premium. While the Credit Suisse Global Investment Sourcebook estimates the historical mean return relative to bonds for Ireland from 1900 to 2008 to be 4.4%, the Commission was cognisant of market turbulence and Irish country-specific risks. The Credit Suisse Global Investment Returns Sourcebook argued that countries like Ireland and Belgium may be subject to greater risk than others as a result of their banking sectors.

8.134 The Commission has assumed an equity-risk premium of 5%.

Beta

8.135 In the draft determination the Commission suggested a range for the DAA's asset beta of 0.5-0.7 and suggested a point estimate of 0.61. This estimate of the DAA's exposure to systematic risk was based on a review of recent asset betas for Heathrow, Gatwick and Stansted airports and evidence relating to the riskiness of the airport sector compared to the rest of the economy.

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[31] Credit Suisse Global investment Returns Yearbook 2009, February 2009, page 13.
[32] Page 76, DAA 2008 Annual Report.

8.136 The Commission has rejected Ryanair's representation suggesting that it is inappropriate to correlate the risks of holding equities in general with the risks of holding equities in regulated entities where the financial viability is statutorily guaranteed. Ryanair thought that the regulatory process eliminates any systematic risks that might otherwise exist. The Commission disagrees that the DAA faces no risks; even if it was accepted that the DAA could never go bankrupt, its equity holder is exposed to the risk associated with higher or lower traffic out-turns within regulatory periods.

8.137 Aer Lingus argued that the Commission overstated the degree of risk faced by DAA and has therefore chosen an excessive beta value. It suggested that a distinction is made between experiencing a risky event and a change in long-term riskiness. Aer Lingus did not accept current events have resulted in a change to the long-term riskiness of the airport sector. It did not believe that there is the same level of risk at Dublin Airport as there is at Stansted and recommended using an asset beta closer to 0.52, as assumed by the CAA for Gatwick Airport. DACC expressed similar views. The DAA responded to these representations by claiming that, aside from normal business risks, it was exposed to considerable volatility risks and uncertainty associated with the airlines' support for infrastructure development and regulatory proposals.

8.138 The Commission has continued to examine the passenger traffic volatility at Dublin Airport since it published the draft determination. Updating table 9.2 from the draft determination, the table below shows that Dublin airport has experienced a greater drop in traffic as a result of the economic downturn than other airports in the sub-group. If the Commission was minded to change its estimate for the DAA's asset beta, it would be in the opposite direction to that argued for by the airlines. The most recently available evidence does not support an argument that Dublin airport faces less demand risk than Stansted airport and that Gatwick is a better comparator. However, the Commission also accepts Aer Lingus' point cautioning about the need to distinguish between experiencing a risky event and long-term risk.

Airport	2007-2008	2008-2009 % change			
		May-May	Jun-Jun	July-July	Aug-Aug
Stansted	-6.0	-18.5	-11.5	-5.7	-7.8
Dublin	0.8	-14.7	-14.0	-12.8	-15.1
Vienna	5.2	-12.8	-10.5	-5.2	-6.8
Copenhagen	0.6	-12.7	-8.7	-6.8	-7.6
Paris CDG	1.6	-7.0	-6.5	-4.2	-4.5
Frankfurt Hahn	-1.9	-7.0	-1.8	0.4	2.9
Gatwick	-2.8	-6.5	-7.5	-4.8	-4.6
Girona	13.6	-4.2	-1.1	0.1	2.5
Heathrow	-1.4	-3.9	-3.1	0.9	0.3
Brussels Charleroi	20.3	25.9	39.6	43.1	43.1

Table 8.14: Annual percentage change in passenger numbers at various European airports

Source: www.aeno.aero

8.139 The outlook for the aviation sector remains broadly similar to the outlook at the time of the draft determination. The Commission does not believe this provides any rationale for varying the asset beta used in the draft determination. In September, IATA stated that global demand continues to improve, although demand fell among European and North American carriers (which provide the majority of services out of Dublin airport).[33] In May 2009, Standard and Poor's (S&P) described the outlook for European airports as the gloomiest since 2001-2002, although it pointed to the positive factors of reduced oil prices [34] By September 2009, S&P considered the GDP results for the major European economies as encouraging but added the cautionary comment that the prospect of a sustained recovery is some way off.[35]

8.140 In making this Determination, the Commission has assumed an asset beta for Dublin airport of 0.61.

Cost of debt

8.141 For the draft determination the Commission thought that the real pre-tax cost of debt was in the range 3.5%-4.5%, and assumed a point estimate of 4.1%. In the draft determination the cost of debt was estimated from market data on bond yields and with reference to the spread on the DAA's existing bonds.

8.142 The DAA described the assumptions used for the cost of debt in the draft determination as too low to be consistent with the investment grade credit rating. It said that the Commission had not explicitly stated what credit rating their cost of debt estimate is associated with. The DAA referred to

[33] IATA, "Traffic volumes improve, but costs rising – profitability remains distant", 29 September 2009.
[34] Standard & Poor's, "Global airports face challenges not seen in decades". 28 May 2009.
[35] Standard & Poor's, "Economic research: European economic outlook: the bad news is the good news isn't good enough". 14 September 2009.

evidence from its financial advisors which showed that the nominal cost of a bond issue by the DAA at a BBB rating would be about 8.8% compared to about 6.8% at a single A rating. The DAA also argued that the cost of debt estimate used should include an allowance for transaction or pre-funding costs. It recommended a higher real cost of debt, suggesting 4.7% for an A credit rating or 5.1% at a BBB credit rating.

8.143 In contrast, Aer Lingus and DACC argued that the real cost of debt used in the draft determination was too high and not supported by the full range of available evidence. There was no case to support a figure higher than the range allowed at Stansted (3.6% to 3.9%). Ryanair suggested that it was inappropriate to allow a debt-risk premium given the Commission's statutory objective of enabling the DAA to operate the airport in a sustainable and financially viable manner. It argued that the DAA is not exposed to any risk on its debt as its recovery of opex and approved capex are all guaranteed as a result of the regulatory process.

8.144 The yields on DAA debt are higher than for other assets, and the DAA does not have an AAA+ credit rating, suggesting that the investment community disagrees with Ryanair's claim that the regulatory system shields DAA debt holders from any risks. The Commission has rejected this representation by Ryanair. At the same time, the Commission is sympathetic to the argument that the cost of debt should be lower if the Commission's statutory objective relating to financeability is interpreted as offering the DAA the option of higher airport charges to meet debt obligations regardless of the circumstances that lead to such a situation.

8.145 The recent evidence from the debt markets suggests that the cost of debt for lower investment grade bonds has fallen since the draft determination. The figure below presents daily data on the annual yield for bonds of 7-10 years maturity between 1 May and 17 November this year. The yields have fallen significantly since May. The first chart also shows a significant narrowing of the spread between BBB-rated and higher-rated bonds, since the publication of the draft determination, falling from around 245 basis points to 91 basis points. The second chart shows that spread of bond yields against the benchmark rate (typically a low risk government bond of similar maturity) has almost halved for all ratings – for BBB-rated bonds this represents a fall of over 200 basis points (or 2 percentage-points).

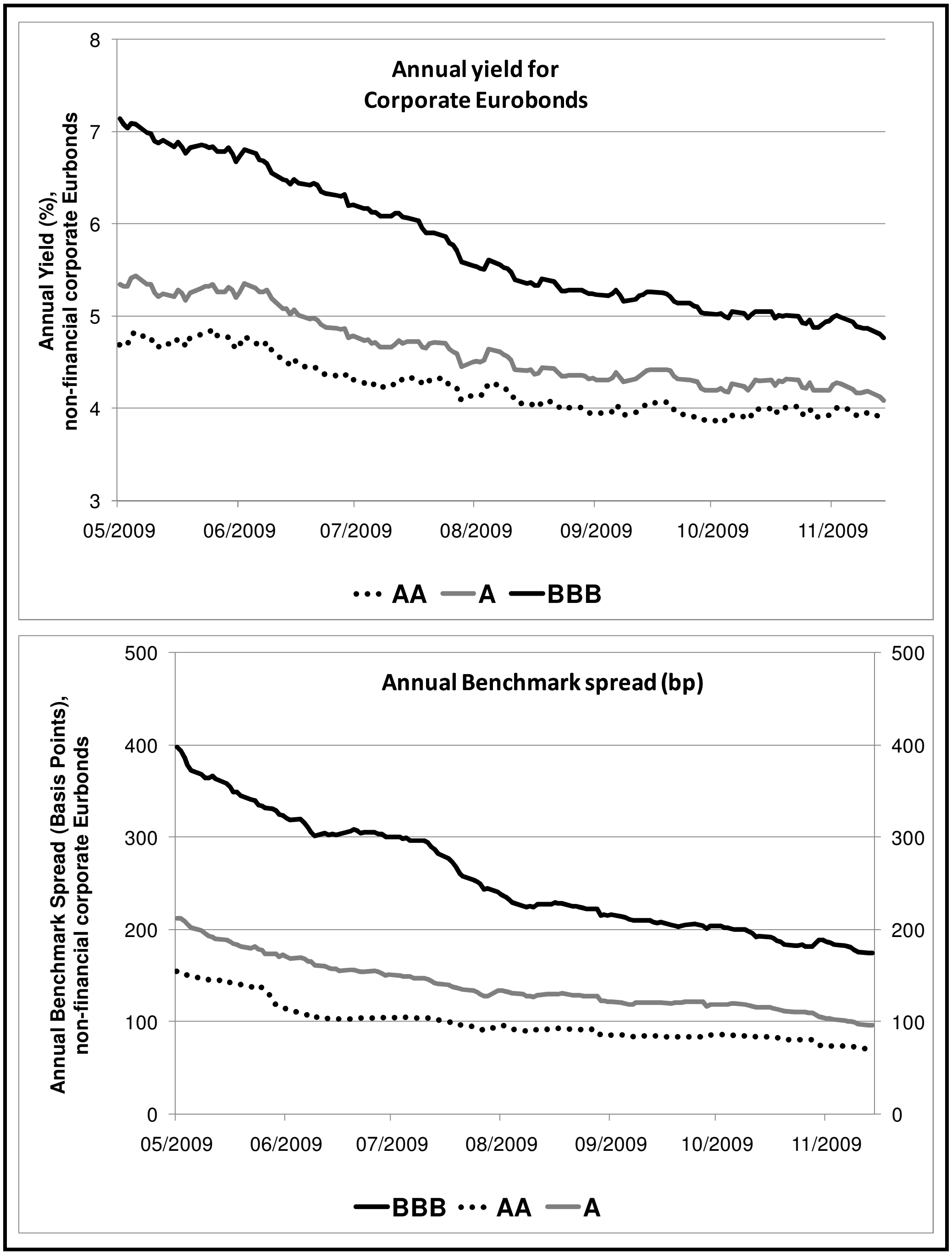

Figure 8.3: Nominal yields on corporate bonds, non-financials (%)

Source: Markit, iBoxx € Non-Financials daily data for annual yields

8.146 The DAA suggested that the maturity of any bond it issued with a BBB rating is likely to be lower than ten years. The chart below presents data consistent with this claim, showing the average length to maturity has fallen for Euro-denominated bonds covering all sectors except the banking and financial sectors rated by S&P and issued between January 2005 and October 2009.

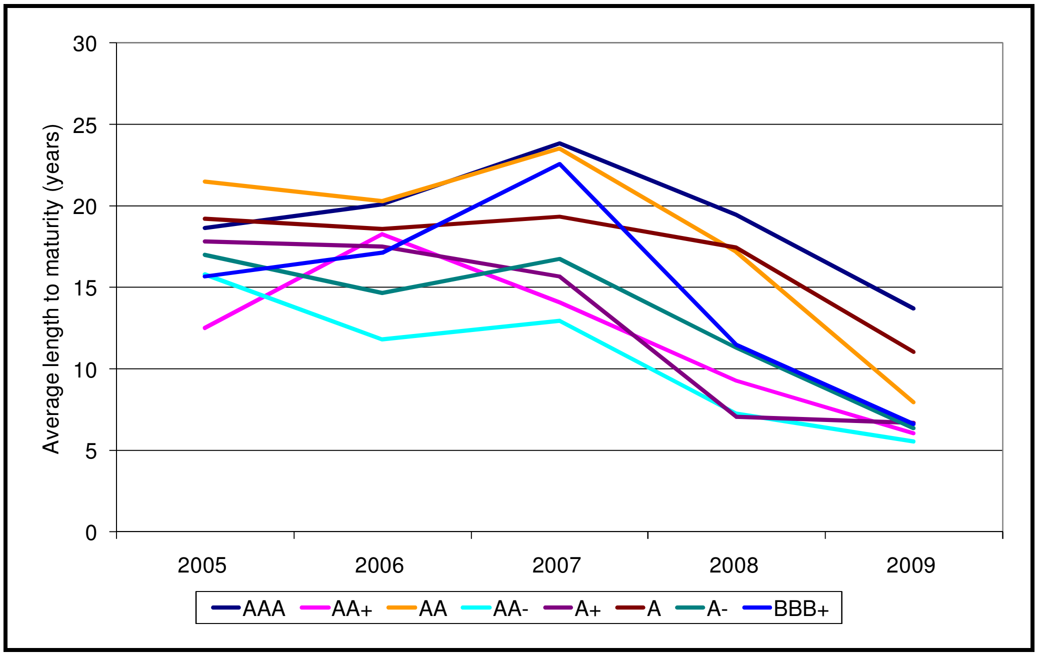

Figure 8.4: Average length of time to maturity for all debt issued 2005–2009 excluding banking and financial (sub-category banking) sectors

Source: Reuters, 6 November 2009

8.147 This does not appear to be significant when assessing the spread between A-rated and BBB-rated bonds. The chart below shows yields on corporate bonds for European benchmarks with range of maturities from 1 to 30 years. The gap between A-rated and BBB-rated corporate bonds appears to be in range 40-60 basis points for all medium length maturity bonds, rather than the 160-180 basis points range that the DAA's consultants NERA suggested was the case earlier in the summer. The relative importance of whether the cost of debt is based on an A-rated or BBB-rated bond is less significant than it might have appeared earlier in the year.

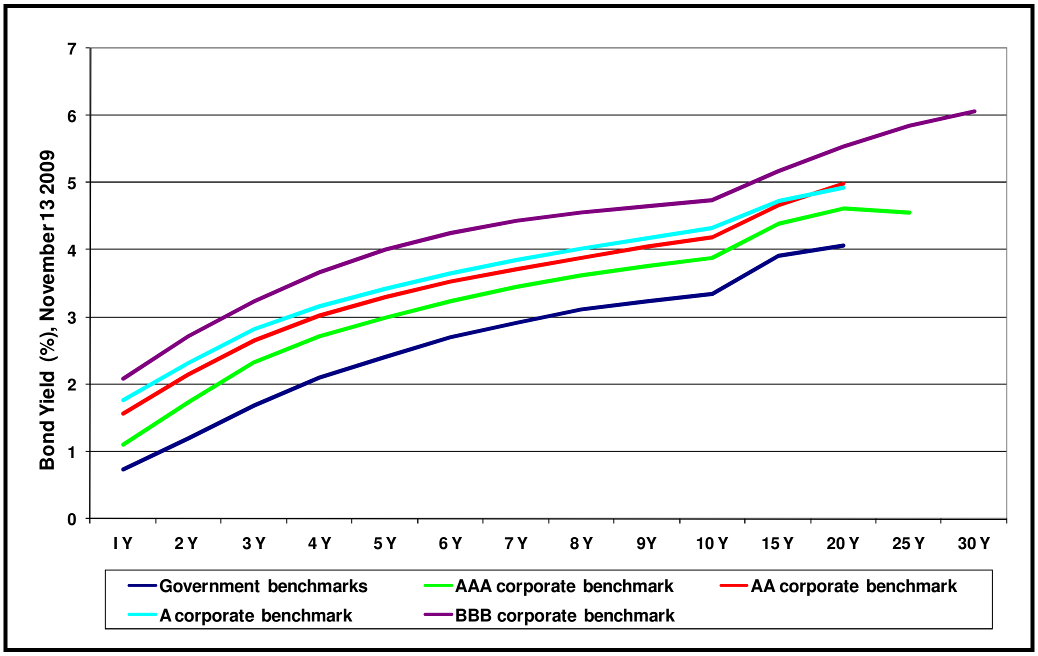

Figure 8.5: Yield spread on corporate bonds for European benchmarks

Source: Reuters, 13 November 2009.

8.148 The evidence available to the Commission suggests that the real cost of debt is less than when it made its determination earlier in the year. It might be appropriate to shift the assumed range for the real cost of debt for investment grade bonds. Whereas the point estimate of 4.1% was towards the middle of the range that the Commission considered appropriate, it now considers the estimate to be towards the top of any such range.

8.149 The DAA's consultants NERA argued that it was imperative that the Commission has regard to DAA-specific evidence about the cost of debt as this would ensure that the estimate reflected market conditions. It found that the DAA's outstanding debt was trading at a level well above where it would be expected to trade if the DAA held a stable single A credit rating. To the extent that the market was already pricing in a credit downgrade, the fall in the spread between A-rated and BBB-rated bonds reported above may alleviate the concern. Since the DAA's representation S&P has published a further report confirming the DAA's A-/negative/A-1 rating. The yields on DAA debt have also fallen since the draft determination, as the chart below shows. Nevertheless, the estimated yield on its 2018 debt of 6.8% (13 November 2009) is above the average yields for investment grade bonds shown in the above figure.

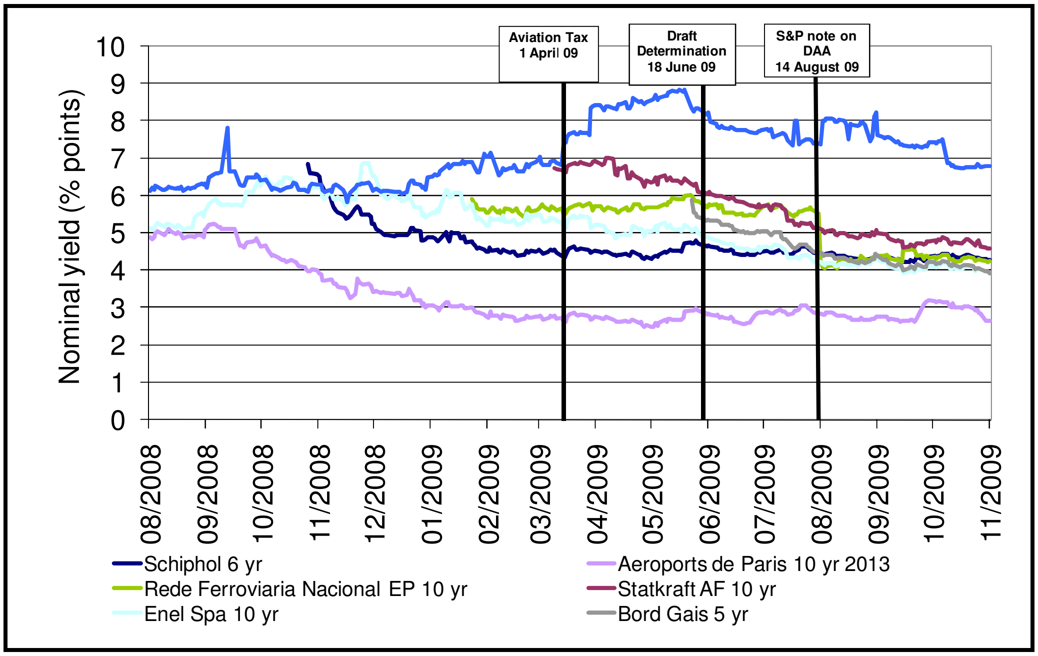

Figure 8.6: Yield on the DAA's issue of debt due to mature 2018 and comparator bond issues

Source: Reuters

8.150 The Commission does not think that this evidence warrants setting a higher real cost of debt than the evidence suggests is generally appropriate for companies with an investment grade credit rating. This Determination includes a one-off increase in the price cap for 2010 specifically to address concerns about the DAA's financial viability. The Commission does not think its cost of capital estimate, to apply for the next five years, should also be increased because a DAA bond is currently offering yields in excess of other investment-grade bonds. The Commission's cost of capital estimate is based on a notional company with an equal split of debt and equity. The traded cost of the DAA Group's debt will depend in part on the company's actual level of gearing.

8.151 To calculate the weighted average cost of capital, the Commission has not uplifted the cost of debt to include an allowance for transaction or pre-funding costs. The Commission is aware that the DAA may experience costs arranging debt financing and the possibility of lenders imposing stricter covenants on debt facilities, but believes that its allowance for opex is the place to address such costs rather than in the WACC.

8.152 The Commission has assumed a real cost of debt of 4.1%.

Gearing

8.153 The Commission assumed a 50% gearing in the draft determination. The gearing determines the relative weightings attached to the costs of debt and equity for the purposes of calculating the WACC. The 50% assumption was consistent with the "optimal" gearing level supported by the DAA in response to the issues paper.

8.154 IATA argued that a more efficient company should finance itself with a greater share of debt. Given the events in the financial markets in the last two years have raised doubts about the wisdom of companies becoming more leveraged, the Commission has rejected this representation.

8.155 The Commission has assumed a gearing of 50%.

9. Financial Viability

9.1 This chapter sets out why the Commission is satisfied that its this Determination enables the DAA to operate Dublin airport in a sustainable and financially viable manner. To reach this conclusion, the Commission has made a one-off increase to the price cap in 2010, over and above the cap implied by the building blocks discussed in the earlier chapters. This contrasts with the draft determination, where no such adjustment was proposed.

9.2 In response to the draft determination, a number of different points were made by parties concerning the Commission's consideration of this statutory objective. The observations varied from suggestions that the draft determination would not allow the DAA to operate the airport in a sustainable and financially viable manner, e.g. the DAA and SIPTU, to criticisms from airlines that the Commission should not reward the DAA for inefficiency by raising prices because of concerns about its financial well being. The comments received included critiques of how the Commission:

- interpreted this statutory objective;
- calculated financial indicators used in its analysis;
- determined the inputs to use in calculations and interpreted outputs from the analysis;
- treated past commitments; and
- conducted sensitivity analyses.

9.3 These points are discussed in turn.

Interpreting the statutory objective

9.4 This is the third time that the Commission has made a determination since the 2004 Act requiring the Commission to enable the DAA to operate the airport in a sustainable and financially viable manner. In 2004 the Commission undertook a specific public consultation exercise on the issue of the amended statutory framework as mandated by the 2004 Act.[36] There were opposing views at that time, and subsequently, from the DAA which has argued that the Commission should regard the statutory objective relating to its financial viability as pre-eminent. The Commission continues to reject this idea.

9.5 In 2005 and 2007, the Commission concluded that it would satisfy its statutory objectives if it made a determination consistent with allowing the DAA Group to realise an investment grade credit rating. The draft determination applied a similar standard, although the Commission noted that there were limits to what it could do, particularly in the short run, to alleviate any financial difficulties that the DAA might be experiencing.

[36] See CP7/2004 and CP9/2004.

9.6 Some users argued that the Commission placed too much weight on this statutory objective relative to its other statutory objectives. DACC thought that the Commission should only consider the DAA's financial viability after it had considered whether the development and operation of the airport meets an efficiency test and the needs of users. It thought that the focus on financial viability was related to the Commission's continued use of a building-blocks approach that created perverse incentives for the DAA to undertake investments with a view to maximising its return on capital. Ryanair made similar points. It felt that the price cap would not need to be so high if the DAA had not wasted money on over-specified and/or over-costed facilities and the Commission considered the impacts of the economic downturn when assessing the level of efficient costs the DAA needed to incur. It thought that it would be perverse to manipulate the price cap to allow the DAA to contrive artificial financial ratios to satisfy its artificially created need for further borrowing. Ryanair also argued that the draft determination was incomplete because it did not refer to the obligation to meet the reasonable requirements of users, instead focussing exclusively on the need to enable the DAA to operate the airport in a sustainable and financially viable manner. IATA thought that concerns over the future financial viability of the airport, even in these challenging economic circumstances, should not be overstated as an excuse for pushing up the price cap. IATA argued that airports enjoy relatively stable earnings streams and there have not been examples of airports raising cash to cover shortfalls.

9.7 The Commission rejects any suggestion that it has neglected its other statutory objectives. As in previous determinations, the Commission has read all three objectives together and in light of each other. The preceding chapters consider the requirements of current and prospective users, most notably in the sections setting out quality of service standards and determining capex needs for the next five years. The Commission seeks to protect the interests of current and prospective users by making determinations intended to allow the DAA to recover only revenues from airport charges necessary to cover a forecast efficient level of costs net of any commercial revenues that the Commission assumes the DAA should be able to generate from other sources.

9.8 SIPTU argued that operational inefficiencies could result if the Commission did not enable the DAA to operate the airport in a sustainable and financially viable manner. It claimed that the price cap was inadequate and inappropriate as it negatively affected the general financeability for all three state airports. If the business was unsustainable, SIPTU argued that this might harm the jobs of its members. Resulting operational inefficiencies could lead to further, unnecessary distortions to the price cap. For the reasons outlined later in this chapter, the Commission is satisfied that its Determination will enable the DAA to operate the airport in a sustainable and financially viable manner.

9.9 Since the Commission is satisfied that it has identified an efficient forecast level of costs (net of commercial revenues) that the DAA should be allowed to recover from airport charges, it then falls to the Commission to consider whether the resulting cap on airport charges is sufficient for the DAA to operate in a sustainable and financially viable manner.

9.10 One immediate question that arises is how could a price cap set to allow the regulated company to recover efficiently incurred costs not automatically satisfy requirements relating to the financeability of the regulated company. In the UK, consultants advising the water regulator Ofwat suggested that the problems may arise because regulated companies often issue nominal debt while regulators set a price cap based on an indexed RAB and a real cost of capital.[37] This can result in a mismatch between income and debt repayment cashflows. The consultants argued that the problem could be solved if regulated companies issued more debt denominated in real terms or increased the share of equity. Ofwat's consultants suggested that the regulator should address such problems through the choice of notional gearing and, if necessary, assume new equity formation.

9.11 Previously, the Commission has considered that it fulfilled the obligation relating to sustainability and financial viability if its projections of the DAA's likely future financial ratios of its liquidity, cash flows and interest coverage allow it to raise, on reasonable terms in the capital markets, the finance necessary to operate Dublin airport. In previous determinations, it was satisfied this was the case given the DAA's existing level of debt and equity. The Commission did not need to consider questions about whether or not the DAA should alter its gearing or whether prices should be raised.

9.12 For the forthcoming Determination, DACC has queried whether the DAA even needs to raise any debt in the next five years to finance further capex at the airport. It observes that the proposed investment plan is relatively small. In such circumstances, DACC suggested that concerns about the DAA's credit rating because of the need to raise debt were less important. The Commission agrees that the DAA does not need to raise large amounts of new capital to fund new investments at Dublin airport. The need to issue new debt in the forthcoming period instead seems to relate to decisions about the level of gearing the DAA Group wants to assume and investment plans for other parts of the DAA Group. The Commission does not believe that it would be protecting the interests of current and prospective Dublin airport users if it made a determination that allowed the DAA to collect extra revenues because of its desire to raise new debt in either of these circumstances.

9.13 At the same time, the Commission is also aware that the DAA's ability to raise capital to develop Dublin airport depends, in part, on investors having confidence in the regulatory environment. Lenders may have purchased DAA debt at an earlier date aware that the Commission thought that an investment credit rating was consistent with meeting its obligation to enable the DAA to operate the airport in a sustainable and financially viable manner. Not aiming for an investment grade now that the debt is in place may create problems for the DAA if and when it needs to raise finance at a later date. For this reason, the Commission believes that it should consider whether its Determination will enable the DAA to maintain an investment grade credit rating.

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[37] See chapter 10, Europe Economics, *Cost of Capital and Financeability at PR09,* 22 October 2009, www.ofwat.gov.uk

9.14 The DAA thought that a BBB credit rating, although investment grade, was insufficient in the current economic climate. The Commission has rejected this representation. First, the Commission is not convinced that the DAA needs to be issuing significant amounts of new debt. To maintain long-term confidence in the regulatory environment, the Commission believes it remains sufficient to continue targeting an investment grade (i.e. BBB).

9.15 In terms of debt that might need to be issued in the forthcoming period, the Commission thinks that there may, at most, be a case for making a determination that seeks to enable the DAA to roll forward existing debt due to expire in 2011. From an analysis of available data, and also from talking to some market participants, the Commission believes that with a BBB rating the DAA could roll forward existing debt. Whether the credit rating would suffice if the DAA needed to fund a significant new investment programme is less clear, but the Commission does not believe that such investments are necessary. Currently, the next significant investment that will meet the requirements of current and prospective users at Dublin airport is a new runway, but that will only be necessary should there be a significant upturn in demand. Should there be such an upturn, it will probably coincide with renewed confidence and willingness to lend in the financial markets and, moreover, the DAA's financial position should have improved markedly compared to the Commission's current central forecast (see figure 9.9 later in this chapter)

9.16 The evidence from the financial markets also suggests that it is possible, although maybe not always easy, to issue debt with a BBB rating. The following chart provides evidence on the level of S&P-rated bond issues since 2005. The same data source does suggest that the average maturity for such bonds has declined; it may be harder for the DAA to issue a 10-year corporate bond than previously; the Commission does not believe that this would be sufficient reason to make a more favourable determination and allow the DAA to achieve a higher credit rating.

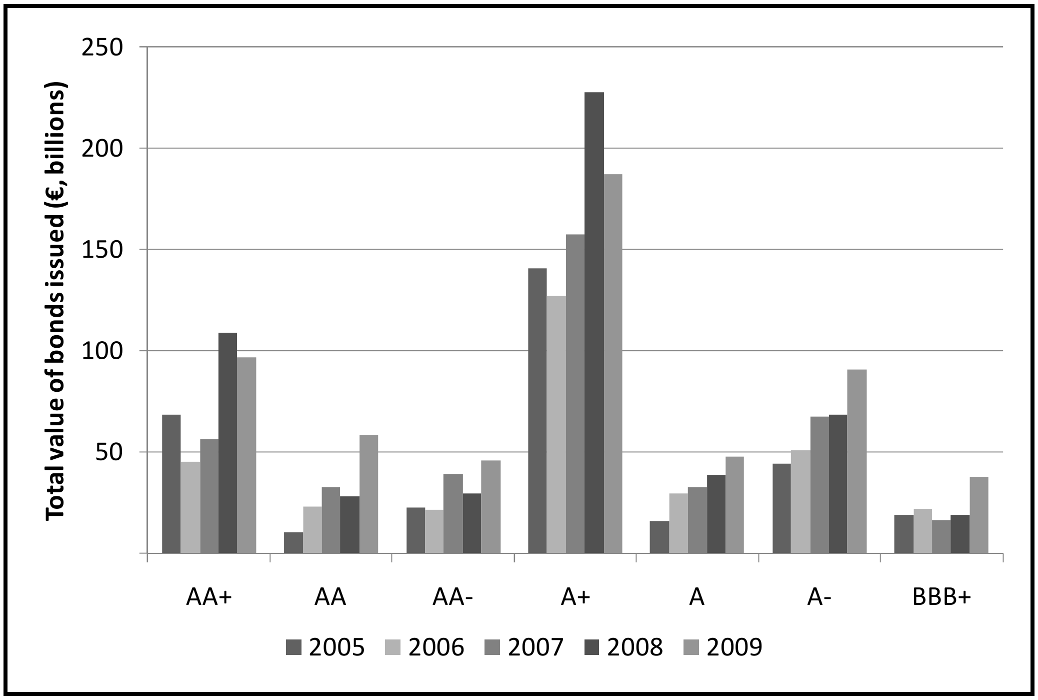

Figure 9.1: Total value of bonds issued by rating, 2005–2009 (8 Nov.)

Source: Reuters, excluding AAA-bonds and bonds rated by Reuters as being in the banking sector.

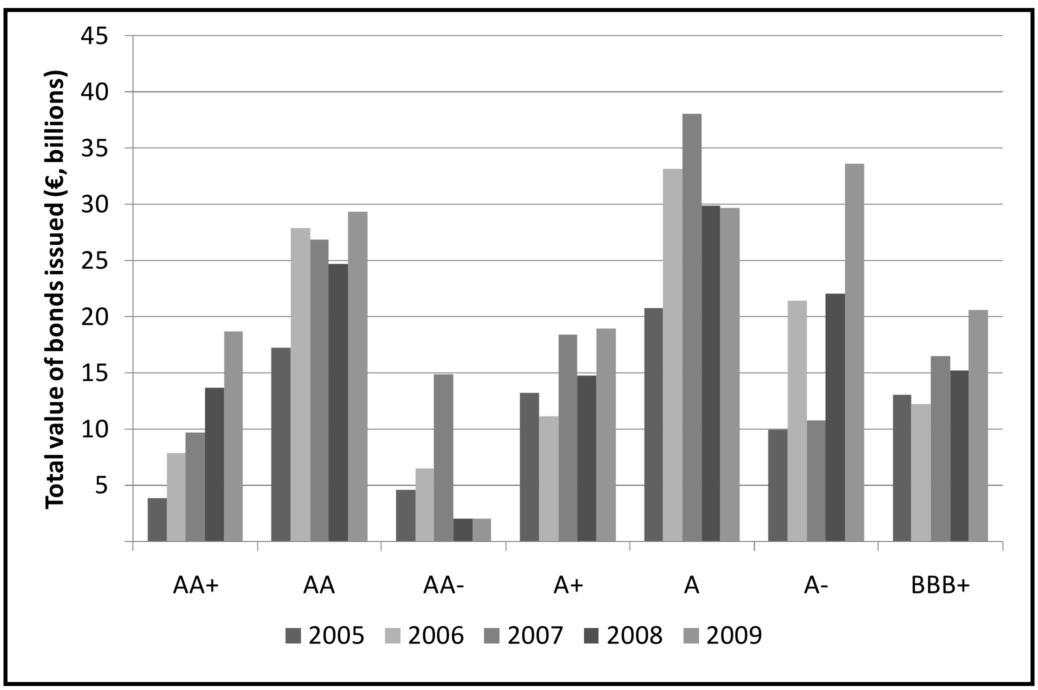

Figure 9.2: Total value of bonds issued by rating, 2005-2009 (8 Nov.) – financial services sector only

Source: Reuters

9.17 The second chart above shows bond issuance for companies in the financial services sector, which is the category to which the DAA Group's 2008 debt issue was assigned by Reuters. Other possible comparator groups that the Commission has considered for the purposes of assessing the ability of the DAA to raise funds are other airports and companies in the utility sector. Such data are more limited. The Commission is aware of two airports that issued debt rated by S&P in 2008. Aeroport de Paris, with a credit rating of AA-, raised €500 million of debt while Schiphol Nederland BV raised €800 million of debt with an A rating. Both airports issued bonds with five years to maturity. In 2009 the utilities sector – electrical and gas companies – issued 30 bonds up to mid September. This included five issued by companies with an A- rating and four by companies with a BBB+ rating.

9.18 While not decisive, the Commission considered other regulatory decisions. In its final determination Ofwat claimed that its approach was consistent with the view expressed to it that the capacity of investors to invest appears to be less sensitive to the difference between high BBB and low A credit ratings.[38] Ofwat targeted financial ratios that are consistent with A-/A3 credit ratings (the majority of companies are in this position). If one of the ratios did not meet the criteria for this credit rating Ofwat ensured it met a strong BBB+/Baa1 credit rating

9.19 Based on the evidence available, the Commission is satisfied that enabling the DAA to realise a BBB credit-rating is consistent with enabling the DAA to operate Dublin airport in a sustainable and financially viable manner. This does not mean that the DAA will always achieve a BBB credit rating – there are many other factors, outside the control of the Commission, which might affect this rating. Moreover, the Commission does not believe that it necessarily has to make a determination that allows the DAA to realise an investment grade rating if it concludes that the DAA's own decisions have caused it to get into financial difficulties and/or the Commission concludes that to achieve such a rating would unduly affect its ability to meet its other statutory objectives. This point is touched on further later in this chapter, when discussing the allegations of reneging on past commitments.

9.20 The Commission also distinguishes between enabling the DAA to operate Dublin airport in a sustainable and financially viable manner, and enabling the DAA to operate without constraint. As in past determinations, the DAA responded to the draft determination outlining the difficulties that may arise if it has a lower credit rating. At lower ratings, the DAA suggested it may have to source funds from banks that may insist on covenants or ratings triggers that give the DAA less financial flexibility and headroom. The Commission does not believe that its third statutory objective necessarily requires it to avoid such an outcome. It may even be that such an outcome would help the Commission realise its other statutory objectives if it results in investors scrutinising the DAA's plans more closely for evidence that the DAA plans to develop the airport in an economic and efficient manner and is not making large investments for which there might not be demand from current or prospective users.

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[38] See Ofwat (2009) *Future water and sewerage charges 2010-15: Final determinations,* www.ofwat.gov.uk

What Constitutes Investment Grade

9.21 The Commission has examined, to the extent feasible, how the credit-rating agencies rate debt. To do so, it has analysed reports by both Moodys and S&P describing how they assess a company's credit rating. While there are some differences, the general approach appears to be similar. Both consider the financial risks having regard to key financial indicators such as FFO: debt, and FFO: interest cover. They also assess the overall business risks, including country risk, industry risk, market position and other fundamental business characteristics. The following table provides indicative ratios for two financial indicators – FFO: debt and FFO: interest coverage – that might be consistent with various credit ratings. The numbers in the table were suggested by the DAA in its response to the draft determination, but the Commission accepts that the table is a reasonable representation of what the market might currently associate with a given credit rating.

Rating	FFO:net debt	FFO: interest coverage
AA and higher	25%+	5.0x
A	20%+	3.8x
A-	16%+	3.5x
BBB+	15%+	3.2x
BBB	13-14%	3.0x
BBB-	11-12%	2.6x
BB	10%+	2.3x

Table 9.1: Required financial ratios for different airport credit ratings
Source: DAA

9.22 The Commission understands that the numbers in the table are indicative rather than decisive concerning the ratios required for a given credit rating. S&P states in its "Criteria Methodology" that companies with identical financial metrics can be rated very differently to the extent that their business challenges and prospects differ.[39] S&P considers business risks in terms of country and industry risks, a company's competitive position and its profitability/peer group comparison. Financial risks are determined in terms of accounting, financial governance and policies, cash flow adequacy, capital structure and liquidity. The Commission also reviewed the approach taken by Moody's, which was broadly similar to S&P. Moody's also considers the financial ratios important but not the sole focus for its analysis.

9.23 Ryanair argued that the DAA benefits from being a government-owned monopoly, and this should be reflected when assessing the appropriate FFO: debt ratio. The Commission believes that this argument is at odds

[39] S&P, "Criteria Methodology: Business risk/financial risk matrix expanded", May 27, 2009

with evidence on how the market perceives the risks associated with DAA Group debt. The DAA's credit rating has been lower than that for Irish government debt for a number of years.

9.24 The Commission believes that a determination that allows the DAA to maintain, in the medium to long term, an FFO: debt ratio in excess of 15% and an FFO: interest coverage greater than 3.2 should allow the DAA to realise an investment grade. The Commission does not believe that the Determination needs to be set such that the DAA can achieve such ratios annually. This is both because the Commission does not believe that failure to meet such ratios automatically results in a credit rating below investment grade, and also because the Commission may sometimes conclude that other statutory objectives require it to temper the scale of any increase in the level of allowed airport charges.

Calculating Financial Indicators

9.25 Both the DAA and Ryanair criticised the way that the Commission calculated financial indicators reported in its analysis. For example, Ryanair argued that FFO: debt calculations should use gross debt net of 100% of cash rather than 50% of cash; it also claimed that the Commission had used the wrong EBITDA and deducted interest paid from the wrong EBITDA figure. The DAA suggested errors in how group cash flows were calculated, the group net debt, the EBITDA included in FFO calculations, the allocation of head-office costs, the calculation of net interest and the treatment of corporation tax.

9.26 The Commission has sought to make calculations that yield results comparable with measures reported by other parties, including credit-rating agencies, but it notes that the approaches used differ between different bodies and across time. For example, S&P now reports FFO: debt ratios using a net debt figure that corresponds to gross debt less 100% of cash; they previously used gross debt less 50% of cash.

9.27 Since the draft determination the Commission has made some changes to the way its model calculates various financial indicators. These changes were made following consideration of the representations received, discussions with rating agencies, and a meeting with the DAA to understand how the DAA's model calculates indicators used in reports it produces. By far the most significant change, from a methodological stand-point, is that debt is now treated as being net of all cash in keeping with how the S&P now estimate the ratio. For the final Determination the Commission has also included a cost allocation for head office costs to Cork and Shannon. In responding to the draft determination, the DAA noted that the Commission’s calculations did not include such an allocation, thereby inflating EBITDA in forecast years by about €5m. The Commission does not believe that these changes materially affect conclusions about whether or not its Determination will allow the DAA to operate the airport in a sustainable and financially viable manner. This point is illustrated in the figure below which shows FFO: debt as presented at the time of the draft and FFO: debt using the same assumptions as in the draft, but the changed methodology.

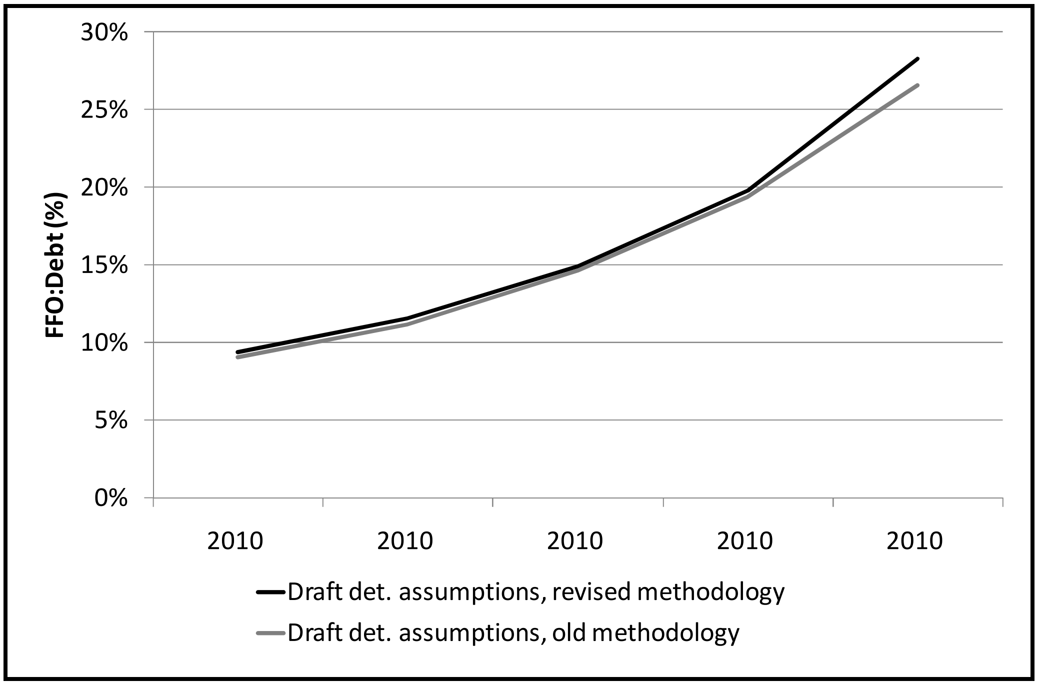

Figure 9.3: Impact of changing method for calculating FFO: debt

9.28 Ryanair also criticised the use of DAA Group numbers, suggesting that the Commission should focus its analysis on Dublin airport. The Commission has to date looked at the DAA Group when considering the ability of the DAA to operate Dublin airport in a sustainable and financially viable manner. The primary rationale for this is that lenders lend to the DAA Group rather than Dublin airport. Furthermore, there is considerable scope for disagreement about how to allocate any debt (and cash) between Dublin airport and the rest of the DAA Group. For example, in its response to the draft determination, Ryanair argued that the proceeds from the sale of the Great Southern Hotel Group and Birmingham, Dussledorf and Hamburg airports should be used to pay down debts to improve the DAA's FFO: debt. The Commission is not convinced that such proceeds should necessarily be included in calculations relating to a hypothetical Dublin airport entity, but its calculations of FFO:debt for the DAA Group do take account of these sales. For these reasons, the Commission has continued to look at the DAA Group numbers when calculating metrics to assist it in assessing the ability of the DAA to operate Dublin airport in a sustainable and financially viable manner.

9.29 Nor has the Commission adjusted its calculations to assume that the DAA has sold off land associated with the possible Dublin airport city project, another suggestion by Ryanair. The Commission is satisfied that the DAA can operate the airport in a sustainable and financially viable manner without having to raise funds by selling illiquid assets such as land that might be used for Dublin airport city.

Projections for the DAA

9.30 The chart below shows the Commission's forecast evolution of DAA Group's FFO: debt and FFO: interest cover during the next determination. To generate the chart the Commission used its own forecasts for passenger numbers, costs and other commercial revenues at Dublin airport and assumed that the DAA collects the maximum level of revenues allowed in each year given a price cap corresponding to that implied by the building blocks (with no quality of service penalty applied). It assumes that T2 will be operationally ready in November 2010. For other parts of DAA Group, the Commission has used the assumptions the DAA provided. It has assumed no dividend payments.

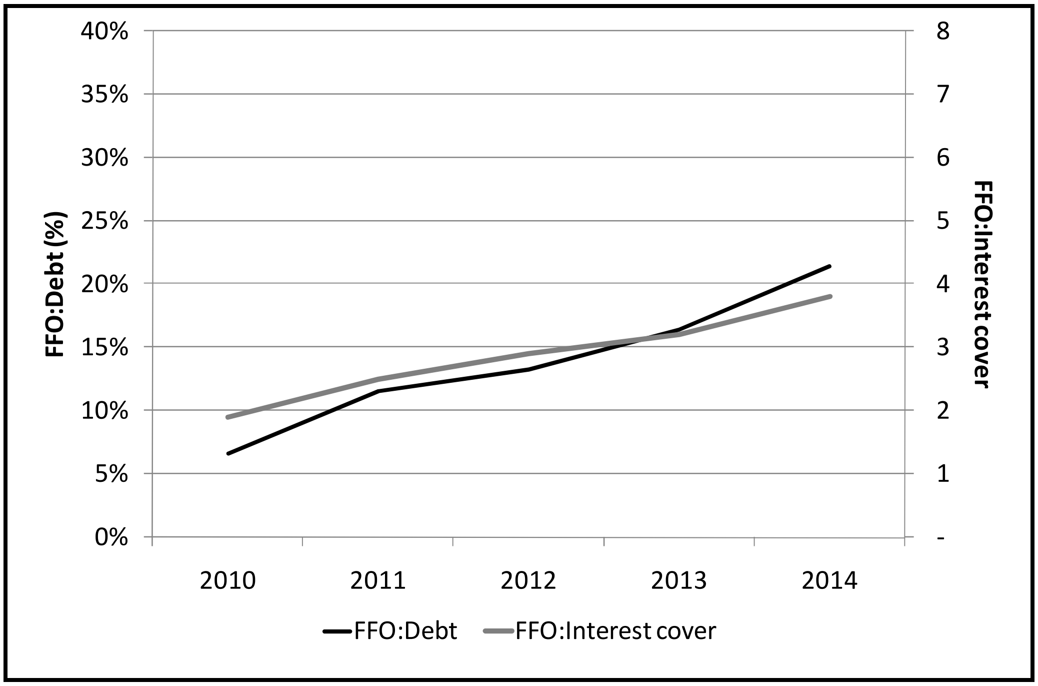

Figure 9.4: DAA Group FFO: debt and FFO: interest cover, 2010-2014

9.31 The Commission forecasts that the DAA will realise financial ratios consistent with a BBB rating by 2012. The forecast ratios continue to improve every year of the Determination. The medium to long term prospects for the DAA Group's finances appear good. In the short term the ratios are poor. The forecast 2010 FFO: debt ratio is lower than estimated at the time of the draft, largely because of the set-up costs associated with getting T2 operationally ready.

9.32 There are good reasons for investors to expect the DAA's current financial ratios to look weaker than they might in other periods.

- The DAA is just completing a major investment, which it has funded without recourse to an equity injection from its shareholder.
- There has been a major global downturn, which has significantly reduced demand at Dublin airport.

9.33 In August 2009 S&P gave the DAA an A- rating despite the Commission's forecasts that the DAA will have an FFO-debt ratio well below 15% in the near future. S&P cited the DAA's strong business risk profile and intermediate financial profile. It also pointed out that the DAA benefits from a high level of origin-destination passengers and the capacity to defer planned capital works in 2010 and beyond. The report was published after the Commission's draft determination, which it referred to.

9.34 Since the draft determination, there are various developments that might affect how investors assess the DAA's business. Demand has fallen further. S&P's August report noted that continued falls in passenger demand through the remainder of 2009 may result in a ratings downgrade. Since the draft determination, the Commission has revised up the level of airport charges it will allow in 2010, which should result in a more favourable credit rating all else equal. The Determination also provides details on what level of airport charges will be allowed if and when T2 opens, which may provide greater comfort to investors about the Commission's intentions regarding T2.

9.35 The Commission remains satisfied that the medium to long-term prospects for the DAA should give investors comfort. In the near future, financial ratios below the target levels may not cause concern if investors see evidence that the company is seeking to manage its costs and that the long-term prospects for demand are healthy.

9.36 But when interest cover is less than two and the FFO: debt ratio is below 7%, the Commission accepts that in the current environment the DAA's investment grade may be at risk. Given that the Commission is satisfied that the forecasts used in the various building blocks are appropriate, it has had to consider how the situation can improve in the short term without assuming greater profitability from either lower costs or increased passenger numbers.

9.37 Two options are available. One is for an equity injection. The Commission estimates an equity injection of around €400m would yield an FFO: debt ratio of 15% in 2010. With such an equity injection, the FFO: debt ratio would rise rapidly above 15% in later years. Such an approach puts the burden on improving the DAA's financial viability on the shareholder. One of the government policies referred to in the 2009 Direction rules out the possibility of an equity injection from the Government.

9.38 Another option would be for current users at Dublin airport to pay higher charges than implied by the building-blocks estimates derived in earlier chapters in this report. The chart below shows what average charges would have to be each year if the DAA was to achieve a 15% FFO: debt ratio in all five years of the forthcoming determination, assuming no effect from these charges on the number of passengers at Dublin airport. The Commission does not think that it is realistic to think that users would not respond if the DAA tried to collect the level of charges suggested by the chart in 2010.

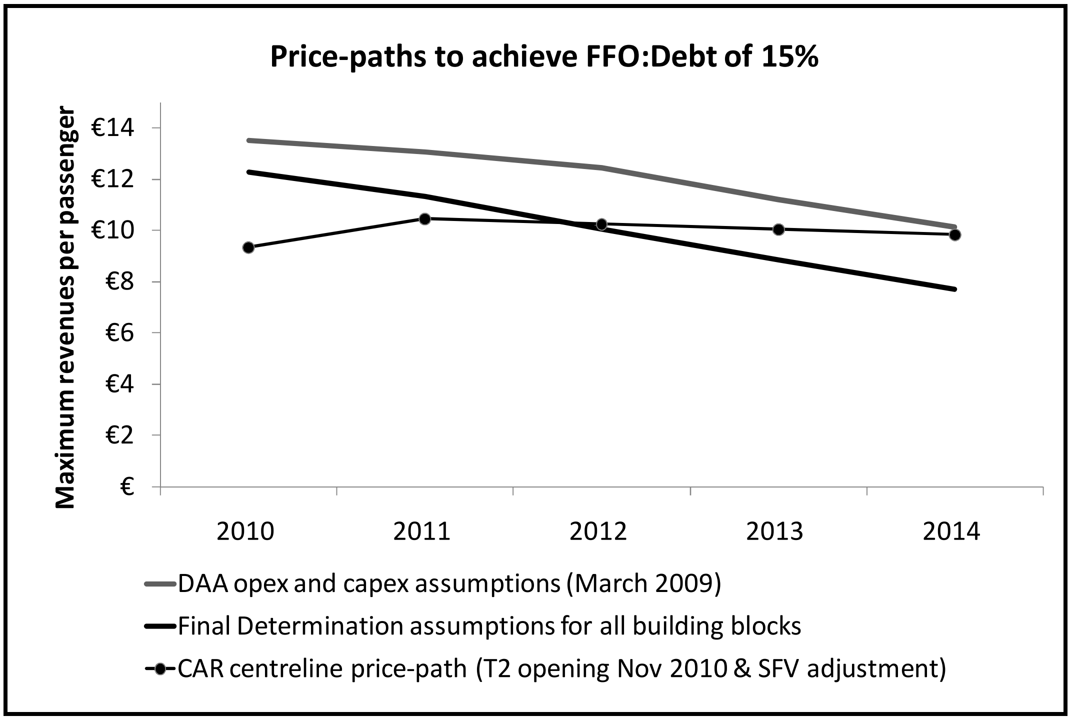

Figure 9.5: Price-path for FFO:Debt at 15% in each year 2010-14

Regulatory Commitment

9.39 Given the financial difficulties facing the DAA in 2010, the Commission has considered whether there is any case for requiring current users to pay extra airport charges over and above what the Commission would set from a straight application of the building blocks approach.

9.40 The DAA alleged in its response to the draft determination that the Commission had reneged on its past regulatory commitments relating to the T2 investment. The Commission outlines here how it believes it should comply with those regulatory commitments. Based on the information available to it at the time of the draft determination, the Commission does not accept that its proposals reneged on past regulatory commitments. However, the continued fall in passenger forecasts and the opex estimates for opening T2 in 2010 have caused the Commission to accelerate some depreciation charges into 2010. In net present value terms, the DAA will be unaffected. The change has an adverse effect on users in 2010 because of higher charges; users in later years will benefit from slightly lower charges.

9.41 In the 2007 interim review, the Commission faced the same problem as now of satisfying potentially conflicting statutory objectives and complying with Ministerial Directions. It made a determination that signalled to the DAA that subsequent determinations would be set to allow the DAA to recover the costs of adding terminal capacity. At the same time, the Commission sought to protect current and prospective users in three particular ways:

- It introduced a "trigger" to protect users from having to pay for T2-related costs if the facility is not ready by end 2009 (as the aviation action plan required);
- It "unitised" depreciation, to protect users in the early years from paying high charges for a facility that would provide most benefit in later years when extra capacity would be most required; and
- It introduced a "box 2" such that the DAA would not collect all of the costs of the investment from the generality of users unless passenger numbers exceeded 33 million given the Commission's concerns that the DAA was incurring costs in excess of what was necessary at the time to address terminal capacity needs.

9.42 In late 2009, the Commission observes that T2 will not be operationally ready by the end of the year, demand forecasts at the airport are lower than in 2007 and, in keeping with many other companies, the DAA is in a less financially healthy position than forecast in 2007. The first observation suggests that any adjustment to the price cap in advance of T2 opening could be perceived as reneging on past commitments to protect users from having to pay for the new terminal if it is not ready by end 2009.

9.43 The second observation reinforces why it was appropriate for the Commission to consider carefully the size of T2 proposed by DAA and to seek to protect users from unwittingly having to provide insurance in the event that demand did not warrant such a large facility. The chart below shows what the DAA's financial ratios would look like if the DAA had spent about €100m less building a second terminal. The DAA's financial situation would be better, but its FFO: debt ratio would still be in single figures. The current difficulties are not due exclusively to past investment decisions by the DAA that appear to have been too ambitious. Even if the DAA had proceeded with a more modest investment plan to build a second terminal in 2007, the subsequent economic downturn would have left it in a financially challenging situation.

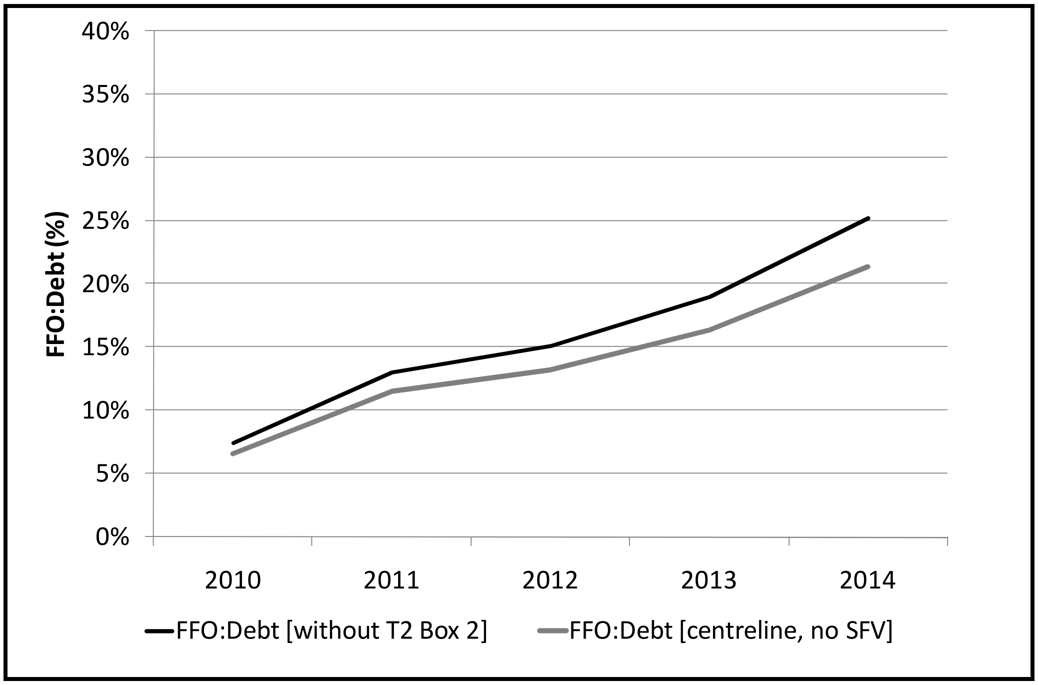

Figure 9.6: FFO: debt if T2 investment had not included "box 2" costs

9.44 The last observation is the basis for the DAA's suggestion that the Commission must allow higher airport charges than proposed in the draft determination if it is not to renege on earlier commitments. The interim review in 2007 included the following statement:

> *"The Commission is willing to allow the DAA to fund a new terminal and will adjust the price cap such that the DAA is able over time to recover the efficiently incurred costs of building the new terminal. The Commission proposes to backload charges, so as to protect current users. Nevertheless, the Commission will also have regard to enable the DAA to operating the airport in a sustainable and financially viable manner. Should the need arise in the future, and subject to the DAA carrying out the investments in an economically efficient manner, the Commission would consider changes to the treatment of the investments in the RAB such that the DAA continues to be financially viable. One common proposal in this respect is to accelerate the depreciation of assets in the regulatory asset base (RAB)."*[40]

9.45 The Commission would be reneging on past commitments to allow the DAA to recover the costs of an investment, to the detriment of future economic and efficient development at the airport, if it does not set airport charges that allow the DAA to recover efficiently incurred costs building the second terminal.

9.46 As outlined above, the Commission is satisfied that this Determination will enable the DAA to improve various financial ratios to levels consistent with investment grade in the medium term. There is no need to accelerate depreciation in later years of the Determination to protect the financial viability of the DAA.

[40] Page 16, CP5.2007.

9.47 In the first year(s) of the forthcoming Determination, the Commission has carefully considered whether further price rises are appropriate given past statements. It has concluded that in 2010 there is a case. The Commission has decided to increase the depreciation charge in 2010 by €13.3m, a sum that corresponds to the remaining value in the RAB of Area 14 capex. This causes the price cap to rise by €0.68. The effect on the forecasts for the DAA's financial ratios is shown in the chart below.

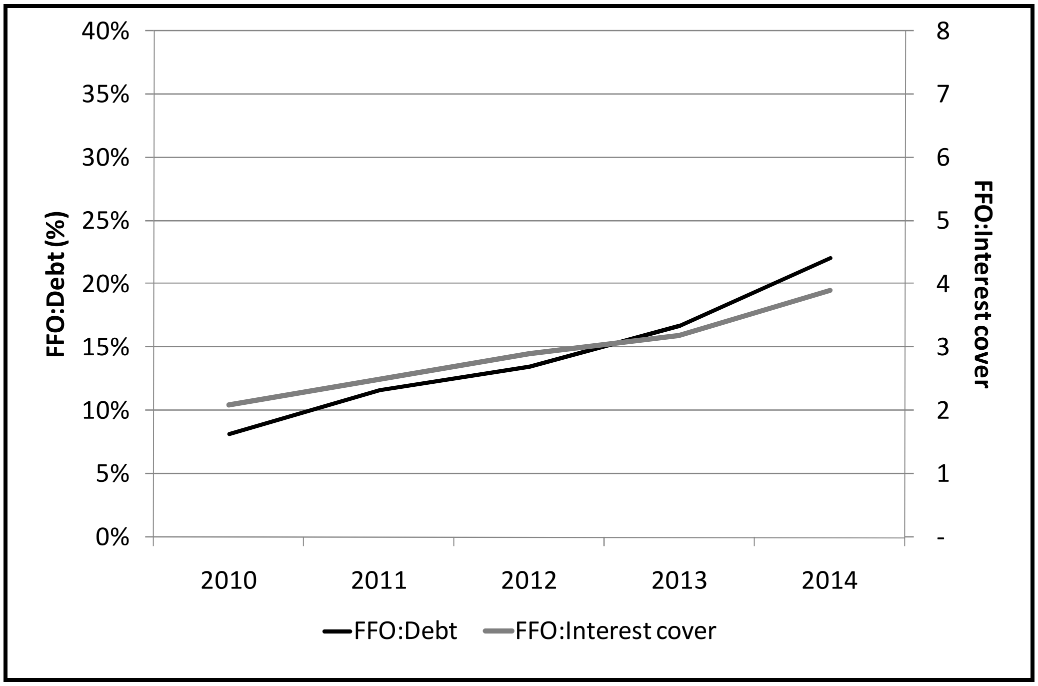

Figure 9.7: FFO: debt and FFO: interest cover including SFV adjustment, 2010-2014

9.48 The adjustment has a modest effect on the financial ratios. For the reasons outlined above, the Commission does not believe that higher airport charges alone will improve the DAA's financial ratios. Moreover, the Commission is also conscious of past commitments to protect users from paying more unless and until the DAA has built a second terminal.

9.49 For later years, the Commission has not proposed any other increases in the level of airport charges allowed in the Determination. It is satisfied that such changes are not necessary to enable the DAA to operate the airport in a financially viable and sustainable manner. The DAA will face challenges similar to those facing other commercial companies, including airlines, following the recent economic downturn. The Commission has to protect the interests of such users as well as enable the DAA to operate the airport in a sustainable and financially viable manner.

9.50 The "regulatory contract" remains in place. Investors should continue to take comfort that the Commission will allow remuneration of investments which it has previously allowed into the RAB. Unless the company decides to increase its gearing substantially, the RAB should comfortably exceed the levels of debt that the DAA needs in 2014. Despite the anticipated disappointment of many users, the Commission has allowed a significant increase in the level of airport charges in 2010, a consequence of the need to recover capital costs in the RAB from a smaller number of users. In 2014 the Commission projects that the DAA should have financial ratios considerably above the thresholds associated with the lower investment grades.

9.51 If the ratios are poor in 2014, the DAA should not expect subsequent one-off adjustments to the price cap unless the DAA can demonstrate that it has acted in a fiscally prudent manner in the intervening period. The Commission will look for evidence that the DAA has sought to manage costs, has not undertaken large investment projects financed through extra debt, or not paid out dividends while its financial ratios are poor. The Commission's statutory objective relates to enabling the DAA to operate in a financially viable and sustainable manner; it is for the DAA actually to operate in such a manner.

Sensitivities

9.52 This section sets out a number of sensitivities that the Commission has considered. The Commission is cognisant that there are downside risks as well as upside risks, notwithstanding the DAA's suggestion otherwise. However, such risks should not automatically lead to the Commission making a more generous determination. Investors considering a company's financial prospects should factor in that there are upside and downside risks associated with an investment. An investor willing to invest in a company projected to have a 15% FFO:debt ratio in a few years time should be aware that there are risks around this projection. For the Commission to set a determination that enabled the DAA to realise a 15% FFO:debt ratio in all scenarios would allow the DAA to realise a considerably higher credit rating than the BBB rating that the Commission considers sufficient to satisfy its statutory objective.

9.53 As was the case in the 2007 interim review, the Commission believes that the greatest risks relate to changing levels of demand. The chart below shows how the Commission believes the FFO:debt ratio will evolve if passenger numbers are 10% more or less than forecast by the Commission. If passenger numbers are 10% lower than the Commission has forecast, then the DAA will take longer to get this FFO:debt ratio above 15%. It takes the five years of the forthcoming Determination for the DAA to reach this threshold. The Commission believes that this risk is worth taking in order to protect the interests of current and prospective users, users who themselves are likely to be financially constrained if demand is as low as this low-demand scenario would imply. The Commission has already allowed the DAA to charge users more because of a large drop in passenger numbers generally associated with the economic downturn and made a one-off adjustment to charges in 2010; it would not be protecting the interests of users if it allowed further increases because of the possibility of continuing economic weakness over and above what is already assumed.

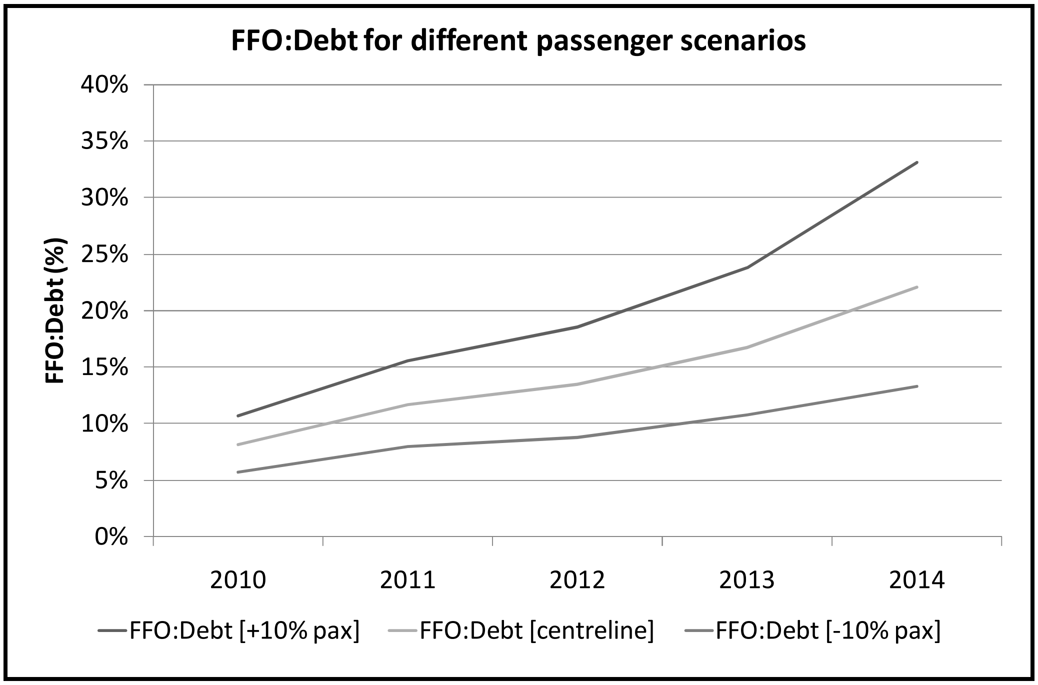

Figure 9.8: FFO: debt passenger sensitivities

9.54 The chart below shows a forecast FFO:debt ratio for various opex outturns, including if the DAA's opex forecasts prove to be correct. In the longer term, the chart suggests that the Determination would enable the DAA to operate in a sustainable and financially viable if its own opex forecasts are correct, although it would take longer to realise a 15% FFO: debt ratio. The Determination is intended to provide the DAA with incentives to manage its costs. The DAA's own estimates would imply real costs on a per passenger basis in the next five years considerably above where they have been for most of this decade (even after allowing for differences in total passenger numbers and the effect of operating two terminals). The Commission does not think that it needs to adjust the price cap because the DAA forecasts such costs.

9.55 Ryanair argued that the Commission had failed to consider the effects of the economic downturn on the DAA's costs which should be falling significantly and at a minimum should include record low interest rates, lower construction costs, lower labour costs and lower sales/marketing costs. It suggested all these factors would improve the DAA's financial outlook. It is obviously true that lower costs, all else equal, will improve a company's financial situation. However, the sensitivity assuming opex 10% lower than the Commission's central forecast shows that even in these circumstances the DAA's financial ratios are relatively weak in the immediate future.

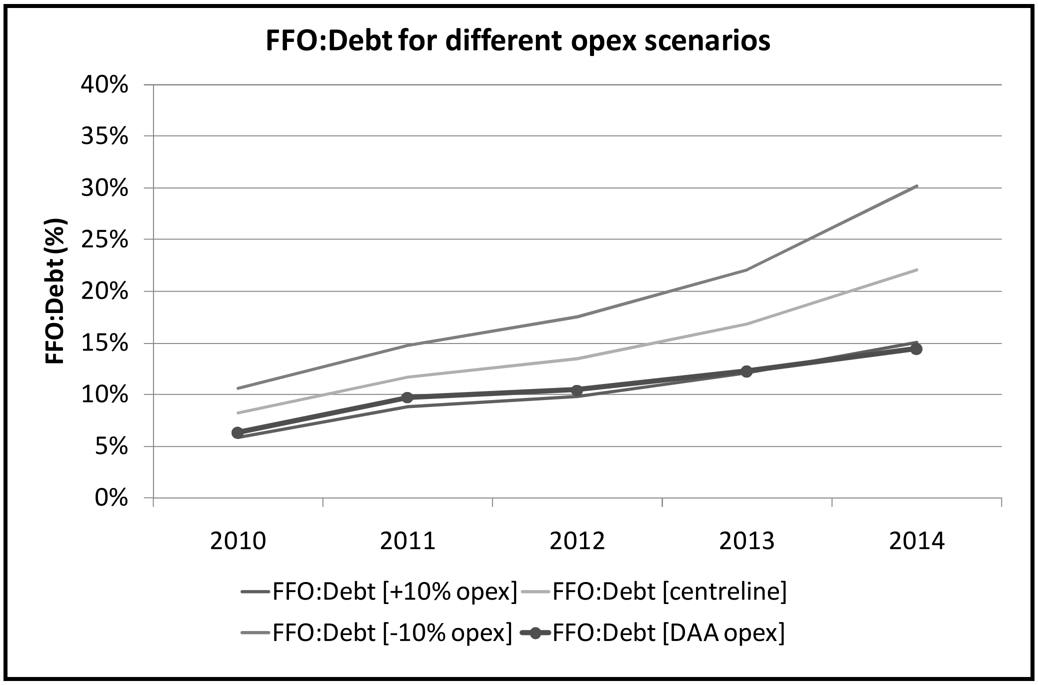

Figure 9.9: FFO: debt opex sensitivities

9.56 The DAA said that the financial model had a flawed basis in which upsides to financial outcomes are assumed without any cognisance of downside risks or of the costs involved in achieving these. The Commission has considered the timing implications for cash flow of some of its assumptions about costs, most notably in the case of upfront costs associated with realising opex efficiencies and with opening T2. More generally, the Commission believes that the earlier chapters of this report deal with the question of what inputs it should assume for costs and revenues at Dublin airport when seeking to develop a central forecast for various financial indicators of the DAA. Those chapters set out why the Commission believes that its forecasts for passenger numbers, costs, and commercial revenues form an appropriate basis for setting a price cap. Given the Commission believes an efficient company should be able to realise such targets, it follows that the Commission believes that it has enabled the DAA to operate the airport in a sustainable and financially viable manner if the allowed level of airport charges is sufficient to allow the DAA to achieve an investment grade given these forecasts for passengers numbers, costs and commercial revenues.

9.57 Based on the centreline forecast and analysis of a variety of scenarios, some not reported here, the Commission concludes that the Determination enables the DAA to achieve financial ratios consistent with an investment grade in the medium to long term. In the near future, the ratios are likely to be below the target thresholds. However, the Commission does not believe this requires it to increase the level of airport charges allowed further than already allowed by its 2010 uplift. It believes that the DAA will be able to operate the airport in a sustainable and financially viable manner given the overall provisions of this Determination.

9.58 A final scenario considered by the Commission is the impact of a potential second runway at Dublin airport on DAA's financial ratios. The determination allows for €288m for a runway, subject to a passenger trigger of 23.5mppa. The scenario presented in the figure below assumes the trigger is met from 2012 and that passenger numbers are 23.5mppa for the last three years of the Determination. The price cap increases by €0.89 from 2012 because of the trigger. The scenario also assumes that the €288m capex allowance is incurred over two years in 2012 and 2013. The Commission is satisfied that its Determination will enable the DAA to operate the airport in a sustainable and financially viable manner in the event that it needs to build a second runway during the period of the Determination.

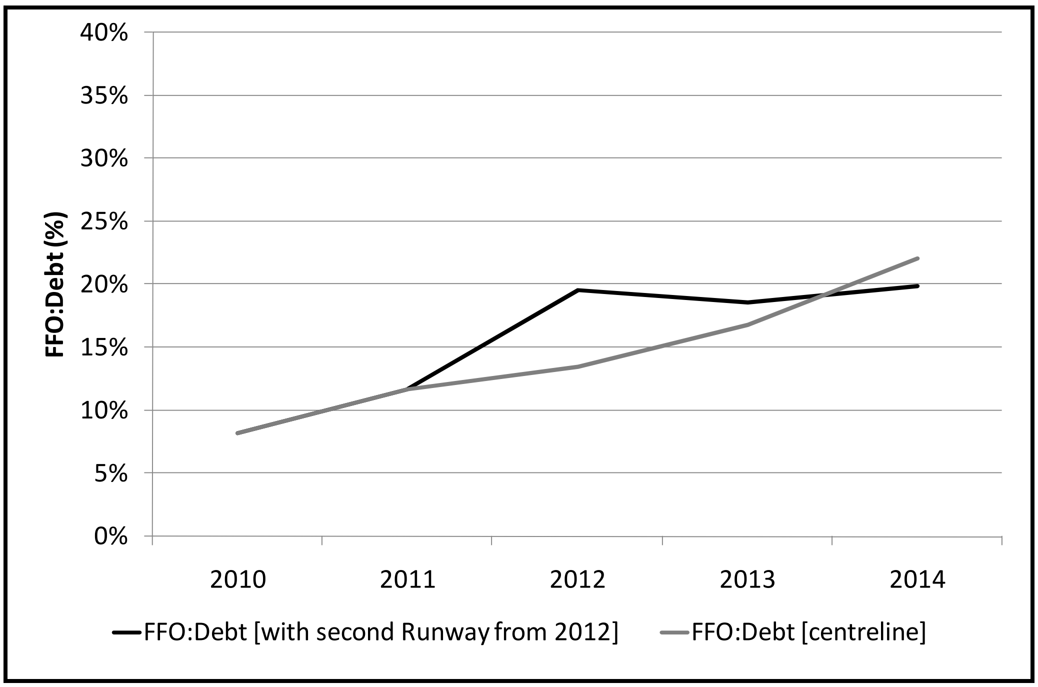

Figure 9.9: FFO: debt – second runway from 2012

10. Other Issues

10.1 This chapter sets out some other issues that do not fit neatly into one of the previous chapters. The draft determination included a similar chapter, which discussed the possibility of sub-caps for cargo or general aviation, how to treat Dublin airport city, and how the Commission proposed to enforce compliance with annual price caps.

Sub caps

10.2 This Determination does not include any sub-caps. The DAA will have the discretion to set whatever structure of airport charges it considers appropriate, subject to complying with an overall, annual price cap. This is what the Commission proposed in the draft determination.

10.3 The DAA supported the Commission's decision not to have any sub caps, arguing that the additional flexibility this allowed it would help it set a structure of charges that promoted more efficient behaviour by airport users. DAA argued that it had:

> *"always maintained that the application of sub caps restricts its ability to use the structure of airport charges to maximise economic efficiency."*[41]

10.4 DACC argued that the price cap should not apply to revenues from non-passenger flights. If necessary, it suggested having separate undertakings such that increases in landing fees for cargo aircraft vary in a manner consistent with the overall cap. The Commission has not adopted this suggestion. To make a determination that excluded non-passenger flights would fail to protect the interests of some current and prospective users. The sort of link proposed between the price cap and charges on non-passenger flights would restrict the DAA's ability to structure airport charges as demand and supply conditions at the airport evolve over the next five years. For example, if the DAA wanted to discourage cargo flights operating at certain times of the day it might be unable to increase the landing charges levied on these users at these times if the Determination had a formal link in place.

10.5 Ryanair was concerned that the CAR had failed to explain why cargo operators do not have to pay a per-cargo charge analogous to the per-passenger charge that Ryanair pays. It suggested that this might help the DAA improve its debt: FFO ratio. The Commission rejects this representation. It believes that the Determination as specified will allow the DAA to collect sufficient revenues from airport charges to be able to operate the airport in a sustainable and financially viable manner: there is no need to allow the DAA to collect additional revenues from one group of users. In terms of the type of charges levied, the Determination allows the DAA to levy a per-cargo charge if it chooses; the DAA could also choose not to levy a per-passenger charge. The Commission does not consider it would support the efficient and economic development of the airport if it became overly prescriptive on the nature of charges it requires the DAA to levy.

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[41] Page 100, DAA response to draft determination.

10.6 Ryanair also thought that a per-cargo charge would end the regulatory gaming whereby passenger airlines subsidise cargo operators. It argued that the Commission had ignored a host of capital and operating costs relating to cargo service that are clearly not recovered from the runway and parking charges that are all cargo operators pay. Ryanair wanted the CAR to publish the percentage of annual movements by airlines and explain why they are not obliged to pay for this percentage of capex and opex at Dublin airport.

10.7 The Commission has rejected this representation. There is considerable scope for arguing about how to allocate costs between different airport users. It does not follow that because general aviation accounts for 7% of movements, it is responsible for 7% of costs. The DAA argued that this is not the case. Moreover, it does not follow that 7% of revenues from airport charges should automatically come from a user-class accounting for 7% of movements. A naïve adherence to simplistic cost-allocation rules without regard to demand characteristics can lead to outcomes that are not in the interests of any current or prospective users. As the DAA observed in its response to the representations made by other parties to the draft determination, most cargo flights occur at times when assets would otherwise be under-utilised. Increasing the charges the DAA has to collect from cargo operators at such times risks reducing the number of and, therefore, the total revenues from such flights without any corresponding fall in overall airports costs. Such an outcome would result in passenger airlines having to pay higher airport charges if the DAA is to collect the same level of total revenues.

10.8 Had the Commission chosen to undertake a more comprehensive analysis, it would have sought to identify the stand-alone and incremental costs of offering particular classes of users (including peak and non-peak users) services at Dublin airport. The stand-alone costs would represent the costs of just providing an airport capable of serving cargo users. The incremental costs would represent the additional costs that arise to serve cargo users, given that the airport is already serving all other users. The difference between these two concepts is likely to be large. For example, the stand-alone costs will have to include the costs of a runway; the incremental costs may include no runway costs. The existence of common costs account for this difference. These are costs incurred supplying a group of products or services which cannot be directly attributed to any one product or service. The Commission believes that recovery of such costs should depend on demand characteristics, consistent with standard economic theory. Those parties with a higher willingness to pay should pay for a greater share of such costs. Such an outcome is consistent with pricing behaviour by passenger airlines, where it is not unusual for two passengers to pay very different fares for a flight while receiving the same service, an outcome not justified with reference solely to differences in the costs of providing services to the two passengers. Because demand is difficult to model with accuracy and subject to change, the Commission believes it more appropriate to allow the DAA the discretion to modulate charges in response to changing preferences at the airport, subject to a cap governing the overall level of revenues that it can collect from airport charges for a given level of passenger numbers.

10.9 Although the draft determination did not refer specifically to the possibility of a sub-cap to realise differential pricing, Ryanair's representation raised the issue of differential pricing. Ryanair observed that there is not uniformity of willingness to pay for services across all airlines, contrary to such claims by the DAA. Ryanair suggested that the Determination could only be made after the Commission has addressed the issues of appropriate facilities, service levels and differential pricing. The Commission discusses issues relating to appropriate facilities in chapters two and eight when it discusses investment needs at the airport; service levels are discussed in chapter four.

10.10 The Commission supports the principle of differential pricing, allowing users to pay more or less depending on exactly what services they want and the value of those services to them. However, this Determination does not mandate a particular structure of charges at the airport. The analysis required would face similar challenges to those outlined above when discussing the case for a sub-cap on charges paid by passenger airlines to ensure they do not subsidise cargo or general aviation users. Such an analysis would also have to consider the costs net of commercial revenues that passengers of different airlines might generate at the airport. It is even possible that airlines that want their passengers to process through a basic facility should pay higher airport charges since the costs of such a facility net of commercial revenues exceed the costs net of commercial revenues of providing a more developed facility. Aside from the analytical challenges, the Commission is also concerned that to impose sub-caps requiring some form of price differentiation risks denying the DAA the necessary ability to respond to changing conditions at the airport in a way that meets the reasonable interests of users. If the Commission made a determination that required a particular structure of charges, there is a risk that all airlines will want to use a particular pier (for example). In this case, the appropriate response would be for the DAA to increase the charge for using that pier relative to the charge for using other piers until such time as the structure of charges meant demand for any given pier does not exceed the capacity of the pier. If the Determination set a sub-cap on the charges that could be levied for using the more popular pier, the DAA would not have the option of changing charges. Instead it would presumably have to require some airlines to pay higher charges to use a pier they do not wish to use.

Dublin Airport City

10.11 The Commission has not made any allowance for any costs (or revenues) that might arise should the DAA proceed with the Dublin airport city project. This is consistent with its proposals in the draft determination. As noted by the DAA, both airlines and the airport supported such a decision when responding to the issues paper. The reason the Commission has not required the DAA to ring fence Dublin airport city is because it does not have the powers to do so.

10.12 Should the project proceed, the Commission will revise the RAB in accordance with the principles outlined in annex three for RAB revisions. It has rejected Ryanair's suggestion that 350 acres of lands that have been costed and financed should be removed from the RAB. The Commission has addressed, in chapter nine, Ryanair's contention that Dublin airport city is relevant when thinking about the ability of the DAA to operate the airport in a sustainable and financially viable manner.

10.13 In making this Determination the Commission has sought to form a view on what constitutes an efficient level of costs to operate the airport. Costs DAA may choose to incur operating other airports or undertaking commercial ventures, including Dublin airport city, are not included in such analysis. Consequently, the Commission has not considered it necessary to analyse all costs incurred to date in designing, developing and launching the Dublin airport city project, despite Ryanair's claims to the contrary. The Commission has forecast future operating costs at Dublin airport. While this exercise has looked at the costs at Dublin airport in 2008, this was done so in the context of considering what would represent an efficient level of operating costs in the future. The DAA allocates the costs of Dublin airport city to a different cost centre, not included in the analysis. Since Indecon-Jacobs' work looking at current operations at Dublin airport referred to evidence from other airports, even if the DAA instead reported costs that included Dublin airport city related work, the Commission would expect this to have influenced conclusions reached about the comparative level of efficiency at Dublin airport currently. Incentive regulation seeks to protect the interests of current and prospective users by providing the regulated company with incentives to become more efficient. Within a regulatory period, if the DAA is able to out-perform the target set by the Commission, it has discretion on how it spends any such profits. Options include paying down debt, paying a dividend or investing in new ventures, such as Dublin airport city.

10.14 Ms Angela Lawton argued that the Commission had to include the airport city in its regulatory oversight since this land is held by Dublin airport in the public interest. The Commission has not accepted this representation. The Commission believes that it is consistent with its statutory objectives when making a determination to exclude the costs and revenues associated with Dublin airport city when arriving at an appropriate price cap. Arguments about whether the land is held in the public interest by Dublin airport are not relevant for the purposes of making a determination.

Price-cap compliance

10.15 The Commission will require the DAA to comply with the price cap annually, and to re-imburse users within 45 days of the calendar year ending if it ever exceeds the price cap for that year. The DAA will be allowed to roll-forward any under-collection, provided this is no more than 5% of the total revenues that the DAA was permitted to collect under the price cap in that year.

10.16 The DAA was the only party to oppose the Commission's decision not to roll-forward over collections in one year into the price cap used in later years (as had been the practice in the previous determinations). It argued that:

- The proposal was inconsistent with the requirement on the Commission to impose the minimum restrictions necessary on the DAA subject to satisfying the Commission's statutory objectives;

- The proposal failed to reflect the practical difficulties with complying precisely with a price-cap expressed as a per-passenger amount while setting a variety of different charges in an effort to encourage a more efficient use of the airport; and

- There were a variety of legal and practical impediments to the DAA complying with this regime.

10.17 The Commission has rejected these arguments. The Determination is fundamentally about setting a price cap; measures designed to ensure that the DAA complies with that price cap as intended are therefore, in the Commission's opinion, necessary minimum restrictions.

10.18 In practice, the Commission does not accept that it is as difficult as the DAA claims to avoid over-collection. It is true that out-turns are unlikely to match exactly the assumptions made when designing a structure of charges that, in total, is hoped to generate revenues no greater than the per-passenger price cap. To avoid this problem leading to an over-collection, the DAA could allow itself some slack by setting a structure of charges that is expected to yield per-passenger revenues from airport charges slightly less than the price cap allows. (This is one reason why the Commission rejects the argument from DACC that there should be no rolling forward of any under-collection, since it wants to avoid a situation where the DAA feels it always has to price exactly to the cap.) The other option available to the DAA is to offer airlines discounts in December from the published level of charges if it looks like the DAA will otherwise over-collect. The Commission does not believe any airport user will object to being invoiced for less than the published charges in the latter months of the year if this proves necessary for the DAA to comply with the cap. The converse may not be true: the DAA is unlikely to be able to invoice for more than advertised late in the year if it will otherwise under collect. This is another reason why the Commission favours allowing the DAA to roll-forward the amount of an under-collection into a future a price cap, provided the amount under-collected is not excessive.

10.19 Should the DAA over-collect in a year, an outcome the Commission believes is most likely to occur should the DAA fail to meet quality of service targets late in the year, then the Commission does not accept that making arrangements to effect rebates to users is an insurmountable problem. For the purposes of compliance, the Commission's interest will be in ensuring that in any year of the Determination the DAA does not retain revenues from airport charges in excess of that allowed under the per-passenger price cap. The precise details of how the DAA chooses to rebate users are left to the DAA to arrange. The potential legal problems identified by the DAA appear to reflect a misunderstanding about what is required. The DAA will be expected to arrange to return any over-collection to users within 45 days. An auditor's report to the Commission confirming that the DAA complied with the preceding year's price cap is what the Commission will require. This report might state that the DAA collected revenues from airport charges less than or equal to the cap; or it might state that the DAA over-collected but subsequently provided rebates to users totalling the required amount such that it has complied with the cap. Such a report does not need to be prepared prior to the rebates being issued. When and how the DAA chooses to prepare its statutory accounts and the timing of its annual general meeting are not affected by its requirement to comply with this Determination.

10.20 If there is an under-collection, the Commission will allow the DAA to collect more in the following price cap up to a maximum equivalent to 5% of the price cap in the year of the under-collection. The decision to allow the DAA to roll forward under-collection is to avoid a situation late in a year of the DAA wanting to increase charges so as to collect all revenues allowed under the price cap, where out-turns have to date yielded a different, lower level of per-passenger revenues to those expected when the DAA set the structure of charges. The restriction on the amount that can be rolled forward is to protect prospective users from having to pay significantly higher price caps in the event that the DAA does under-collect. The Commission does not want its Determination to be interpreted as an opportunity for the DAA to offer heavily discounted airport charges to current users in exchange for a much higher (potentially non-binding) price cap at a later date.

10.21 Because the amount following an under-collection that can be rolled forward from one year to the next is capped, the Commission has concluded that DACC's concerns about possible windfall gains if passenger numbers are growing are unlikely to be material in practice. It has consequently chosen to persist with the "k-term" it has used in previous determinations for the purposes of estimating the sum to roll forward when there is an under-collection of less than 5%.

10.22 As indicated in the draft determination, the Commission envisages that should the DAA under-collect in 2014 by less than 5%, this sum will be considered when making the next determination.

10.23 For the first two years of the forthcoming Determination, the Commission has included an adjustment for any under or over collection by the DAA in 2008 and 2009 respectively.

Other

10.24 Ms Angela Lawton queried the absence of any analysis of social costs in the draft determination. She felt that the Commission should have considered costs such as the increased risk of flooding, noise and air pollution and increased traffic congestion around the airport.

10.25 The Commission has concluded that it would be inappropriate for it to adjust the Determination on the basis of such factors. Its statutory objectives do not require such costs to be considered. Furthermore, a determination setting a price cap governing the revenues that the DAA can collect seeks to have regard to costs that the DAA controls. The Commission intends that the cap allows the DAA to recover its costs should it operate the airport efficiently. The DAA does not incur the social costs; increasing the price cap on account of these costs therefore allows the DAA to collect more revenues than its own private costs. The need for the DAA to manage its own costs to earn a profit would be reduced.

11. Compliance with Section 33 of the 2001 Act

11.1 Section 33 of the 2001 Act, as substituted by Section 22(4) of the 2004 Act, sets out the Commission's statutory objectives, and also the statutory factors to which the Commission must have regard. Previously the Commission has set out its interpretation of these statutory objectives and factors.[42] This chapter sets out how the Commission believes that this Determination complies with the various statutory objectives and factors that apply.

Statutory objectives

11.2 There are three statutory objectives. These must be read together and in light of each other. The Commission remains of the view that the statutory objectives permit the regulation of airport charges imposed at Dublin Airport by the DAA by reference to the economic concepts of productive, dynamic and allocative efficiency. Accordingly, economic efficiency continues to be the driving principle of this Determination as it has been for all price-cap determinations since 2001.

11.3 The Commission shows how full consideration has been given to each of the statutory objectives in this Determination below.

- *to facilitate the efficient and economic development and operation of Dublin Airport which meet the requirements of current and prospective users of Dublin Airport*

11.4 The Commission facilitates the efficient and economic development and operation of Dublin Airport for both current and future users by making a determination that allows the DAA to recover revenues sufficient to meet efficiently incurred costs of operating and developing the airport. Chapters seven and nine provide details on how the Commission has determined what capital and opex to include in its calculations when setting a price cap.

11.5 The Commission has applied the meaning of "user" defined in section 33 of the 2001 Act for the purposes of making an airport charges determination to be any person (a) for whom any services or facilities the subject of airport charges are provided at Dublin airport, (b) using any of the services for the carriage by air of passengers or cargo provided at Dublin airport, or (c) otherwise providing goods or services at Dublin airport. The Commission is aware that this definition differs to Article 2 of the Airport Charges Directive which defines "airport user" as meaning any natural or legal person responsible for the carriage of passengers, mail and/or freight by air to or from the airport concerned.

[42] See CP9/2004 "Commission for Aviation Regulation's conclusions on the impact of the amendments to the Aviation Regulation Act, 2001, on the regulation of maximum levels of airport charges in Ireland " www.aviationreg.ie

- *to protect the reasonable interests of current and prospective users of Dublin Airport in relation to Dublin Airport*

11.6 The reasonable interests of current and prospective users of Dublin airport are protected by setting a price cap that reflects a reasonable estimate of the costs that need to be recovered to provide the services that current and prospective users require. Relevant to this objective is both a consideration of costs (see chapters seven and nine) and also a consideration of what the reasonable interests of current and prospective users might be. To protect users' reasonable interests, the Commission has set quality of service standards that the DAA must provide (see chapter five) and has made a determination that only includes allowances for investment projects that the Commission believes meets the reasonable requirements of current and prospective users (see chapter nine).

- *enable Dublin Airport Authority to operate and develop Dublin Airport in a sustainable and financially viable manner*

11.7 Chapter ten on financial viability sets out why the Commission believes its Determination enables the DAA to operate and develop Dublin Airport in a sustainable and financially viable manner. The annual price cap is set to allow the DAA to recover all forecast operating costs as well as allowing for some depreciation charges and a return on capital, as measured by the RAB. Those investment costs not fully depreciated during the forthcoming Determination will be included in the closing RAB in 2014, with the intention being that such costs should be remunerated through airport charges at later dates.

Statutory factors

11.8 There are nine factors to which the Commission must have due regard when making a determination on airport charges. Consideration of each is set out below.

- *the restructuring including the modified functions of Dublin Airport Authority*

11.9 Section 33 of the 2001 Act addresses the situation in respect of the proposed restructuring of Cork and Shannon airports. The restructuring has not occurred to date nor has the Commission received any indication that the restructuring of the DAA is likely to occur during the new regulatory period. No issues in respect of restructuring or modified functions have been put to the Commission and therefore it has not had to take this factor into account.

- *the level of investment in airport facilities at Dublin Airport, in line with safety requirements and commercial operations in order to meet the needs of current and prospective users of Dublin Airport*

11.10 Chapter nine sets out how the Commission has assessed the DAA's CIP with a view to ensuring that an efficient level of investment is allowed for the new regulatory period to meet the needs of current and prospective users and in recognition of any safety obligations placed on the DAA.

- *the level of operational income of Dublin Airport Authority from Dublin Airport, and the level of income of Dublin Airport Authority from any arrangements entered into by it for the purposes of the restructuring under the State Airports Act 2004*

11.11 Operational income includes airport charges and commercial revenues associated with operating Dublin airport. Chapter eight presents the approach taken by the Commission towards commercial revenue at Dublin Airport. The Commission continues to use a single-till approach when determining a cap on airport charges. The Commission has included commercial revenues from Dublin airport in the regulatory till, and sought to set a cap on airport charges such that the DAA will be able to recover sufficient income from these two sources (commercial revenues and airport charges) to recover efficiently incurred costs.

11.12 The Commission is not aware of any income arising from any arrangements entered into by the DAA for the purposes of restructuring under the 2004 Act.

- *Costs or liabilities for which Dublin Airport Authority is responsible*

11.13 There are a number of chapters in this Determination where the Commission has had regard to the costs or liabilities for which the DAA is responsible. This is most obviously demonstrated in chapters seven and nine, where the Commission has regard to the operating and capital costs of the DAA.

- *the level and quality of services offered at Dublin Airport by Dublin Airport Authority and the reasonable interests of the current and prospective users of these services*

11.14 This Determination includes a service quality monitoring scheme, something not previously included in determinations for airport charges at Dublin airport. Chapter six provides details on how the Commission has had due regard to the levels and quality of services at Dublin airport and the reasonable interests of the current and prospective users of these services.

- *Policy statements, published by or on behalf of the Government or Minister of the Government and notified to the Commission by the Minister, in relation to the economic and social development of the State*

11.15 The Commission received a notification from the Minister for Transport on 29 October 2009 under this statutory factor that referred to the government policy document *Building Ireland's Smart Economy: a framework for sustainable economic renewal*.

11.16 The Commission has carefully considered how to have regard to this Smart Economy framework when making its Determination. The Smart Economy framework aims to establish a plan to restructure the Irish economy so that Ireland will be in a good position when the global recovery begins. It sets out five action areas to reorganise the economy over the next five years and to secure the prosperity of current and future generations:

securing the enterprise economy and restoring competitiveness, creating an ideas economy, enhancing the environment and securing energy supplies, investing in critical infrastructure and providing efficient and effective public services and smart regulation.

11.17 Action Area 4 of the Smart Economy framework refers to the DAA's capex plan. The Government commits to high levels of investment in infrastructure to provide an important basis for economic recovery and growth. It explains how it will maintain and prioritise the public capital programme to rebalance more in favour of domestic investment where possible. One of the key actions referred to in relation to Action Area 4 is the €2 billion that will be invested in Dublin Airport over the coming years, and it gives the example of the DAA building a new terminal funded from non-Exchequer resources. The Government refers to the DAA's large scale and ongoing investment programme and completion of Pier D in Dublin Airport as strengths for the competitiveness and productivity of the economy. The Commission has made a Determination having due regard to the need for infrastructure projects at Dublin airport: the Commission has allowed for around €200 million in new investment when setting the cap, and it has included provision for additional expenditure, most notably on a new runway, when conditions justify such spend.

11.18 The Smart Economy framework stated that investment areas will maximise returns and focus on priority areas, as well as encompassing a review of lower cost options where feasible. The Framework states the Government's commitment to enhance value for money through the appraisal of infrastructure projects. As in past determinations, the Commission has carefully reviewed the costs required to undertake capital projects and in some cases made allowances for lower cost options than those originally proposed by the DAA.

11.19 A central facet of the framework is the development of first-class infrastructure that will improve quality of life and increase the competitiveness of Irish business. The introduction of service-quality monitoring in this Determination will ensure that the DAA delivers services at Dublin Airport to a good quality, given the price paid for the infrastructure.

11.20 The Smart Economy addresses some of the threats to the future performance of the economy such as the weakening of competitiveness as a result of wage and price pressures and continued infrastructural deficits. The framework notes that Irish price levels are about 20% above the European Union (EU) average and this must be reversed. The framework states that it is necessary that there is improved efficiency and effectiveness and value for money across the public service. Also within the Social Partnership framework, the Government will seek to ensure wage moderation and flexibility consistent with our competitive position, while also securing industrial peace and stability. Chapter six of this report sets out the analysis that the Commission undertaken to arrive at an estimate of what it considers to be an efficient level of operating costs in the existing and new terminals. This includes consideration of what assumptions to make for wages into the future.

11.21 The Government aims to develop the interests of Ireland in new and fast developing markets to develop strong foundations for future export led economic growth and the restoration of competitiveness. In addition to trade opportunities, the intention is to pursue the potential for attracting tourism and investment from these countries, with a focus on the potential of sovereign wealth funds. It was noted that Tourism Ireland will open its new and developing markets hub in the United Arab Emirates to drive the development of key new markets such as India and China. It also aims to position Ireland as a location of choice in the international education market. The Government will strengthen bilateral education relations between Irish and Chinese authorities at third level, including further development of economic and cultural links. The Government will direct Enterprise Ireland to build on its existing network of offices in Asian and other high growth areas, while the IDA will seek to diversify the source of foreign direct investment (having set up offices in Mumbai, India and Beijing). Ministerial led missions will be expanded to build on both existing markets and new opportunities in Asia, the Gulf States, Brazil, Russia and developing EU markets.

11.22 The opening of a new terminal at Dublin Airport and the inclusion of triggers to allow the development of a new runway expands the business opportunities for the DAA due to the availability of new capacity. If the DAA meets the trigger for the development of a new runway, then the DAA will have the opportunity to encourage links with destinations in the Far East and beyond. This will help meet the objective of the Smart Economy to establish new links with newly industrialised countries.

11.23 In summary, in having due regard to this statutory factor, the Commission has concluded that it should seek to make a determination that is consistent with allowing the Irish economy to improve its competitiveness. The Government policy referred to seeks control of costs and suitable investment such that Ireland is in a position to take advantage as and when the global economy improves. The Commission has had regard to these policy objectives by only allowing charges consistent with an efficient level of costs (both operating and capital) at Dublin airport, while at the same time including into its calculations for airport charges sums sufficient to allow the DAA to fund necessary investments at the airport.

- *the cost competitiveness of airport services at Dublin Airport*

11.24 The Commission believes that this factor must be read in the light of statutory objective (a), which seeks the efficient operation of Dublin airport. The Commission has taken due regard of this factor when setting its indicative maximum levels of airport charges per passenger, in particular in its bottom-up analysis of the DAA's operating costs.

11.25 In the issues paper the Commission noted that the DAA's charges for turning around an Airbus A320, Boeing 737 or Boeing 747 were between 61 and 80% of the average for a sample of 32 airports. These findings are consistent with results that the Commission had previously derived from looking at published accounts for a number of airport operators detailing average per passenger revenues for airport charges. While the envisaged Determination in the forthcoming period will allow the DAA to charge more than is currently the case, it should not result in the DAA charging substantially more than the average charged at the various airports in that sample.

11.26 The air travel tax that has been introduced has made Dublin airport a more expensive venue to fly to and from than it was when the Commission looked at comparator data. Dublin airport's relative cost competitiveness may have declined because of a factor outside its control. The Commission has concluded that it would be inconsistent with its statutory objectives to reduce the level of airport charges the DAA is allowed to collect merely on account of a new tax being imposed.

11.27 Following the draft determination, Ryanair offered to provide confidential data on the charges it pays at a variety of other airports. It also suggested that the Commission might seek similar information from other airlines at Dublin airport. The Commission did not pursue this offer since it concluded that the other sources of evidence on charges that it had looked at were more relevant, and also sufficient, for the purposes of making a determination. The Commission's task is to make a determination governing all airport charges that the DAA may collect at Dublin airport. Data sources relating to what other airports are collecting, rather than what certain individual airlines pay at different airports (which may reflect particular deals they have struck), provide a better insight into the overall competitiveness of Dublin airport. Moreover, the Commission considered that it already had sufficient evidence to conclude that Dublin airport was neither the cheapest nor most expensive airport around, and that to satisfy its statutory objectives relating to efficient operations at Dublin airport and to allow the DAA to operate the airport in a sustainable and financially viable manner, the Commission would have to set the charges in recognition of the DAA's position regardless of what data from individual airlines showed about how the charges they pay at Dublin airport compare to what they pay at other airports.

- *imposing minimum restrictions on Dublin Airport Authority consistent with the functions of the Commission*

11.28 Similar to previous determinations the Commission has sought to minimise restrictions on the DAA consistent with its own statutory functions. By proposing an overall annual price cap on airport charges, the Commission will be affording a large measure of discretion to the DAA. This Determination includes no sub-caps, allowing the DAA full discretion to set charges within the confines of an overall price cap. Measures linking the price cap to quality of service standards and investment projects at the airport are designed to protect the interests of current and prospective users, and are necessary if the Commission is to satisfy its statutory objectives.

- *such national and international obligations as are relevant to the functions of the Commission and Dublin Airport Authority*

11.29 For the purposes of making a determination, national and international obligations are only relevant when they affect the functions of the Commission or the DAA.

11.30 In formulating its Determination the Commission has had due regard to the DAA's safety and compliance obligations under national law, including the Air Navigation and Transport Acts, 1936 to 1998, as well as legislation relating to the IAA. It has also had due regard to the particular security, immigration and health and safety requirements that airports are subject to because they are used to enter and exit the State. Those requirements are evolving and could be subject to change during the period of the Determination.

11.31 In relation to international obligations, Ireland is a signatory to the Chicago Convention, which has been incorporated into domestic law by the Air Navigation and Transport Act 1946. To the extent that this Treaty creates international and national obligations, the Commission has had due regard to it.

ANNEX 1: Respondents to the draft determination

A1.1 The following parties responded to the draft determination by the statutory deadline:

- Aer Lingus*
- Angela Lawton
- bmi
- Chamber Ireland
- Dublin Chambers of Commerce
- Dublin Airport Authority*
- Dublin Airport Consultation Committee*
- European Investment Bank
- Failte Ireland
- Fingal Dublin Chamber
- Forfás
- Goodbody
- International Air Transport Association
- Irish Business and Employers Confederation
- IDA
- Irish Exporters Association
- Irish Hotels Federation
- Irish Tourist Industry Confederation
- Incoming Tour Operators Association Ireland
- Portmarnock Community Association
- Ryanair*
- Services Industrial Professional and Technical Union

A1.2 The four respondents marked with an * also provided a response to the responses.

ANNEX 2: Commercial revenues and passenger growth

Direct retail (gross)

Long-run model	coefficient	std. error
const	7.67	0.73
Passengers (t)	0.56	0.05

Mean dependent var	15.65
Adjusted R-squared	0.56
F(4, 87)	119.53
Log-likelihood	59.26
Durbin-Watson	1.22
Observations	96
Sample	Monthly data Jan 2001–Dec 2008, all data real All variables measured in logs, model includes quarterly dummies

	Differences	coefficient	std. error
	const	4.12	1.08
	Change in passengers (t)	0.74	0.12
A	Passengers (t-1)	0.34	0.07
B	Direct rental (t-1)	-0.57	0.10
	Long-run elasticity	A/-B= 0.59	

Mean dependent var	0.00
Adjusted R-squared	0.50
F(6, 84)	32.64
Log-likelihood	67.03
Durbin-Watson	2.14
Observations	95
Sample	Monthly data Jan 2001-Aug 2009, all data real All variables measured in logs

Concession retail

Long-run model	coefficient	std. error
const	-3.62	1.14
Passengers (t)	1.26	0.08

Mean dependent var	14.21
Adjusted R-squared	0.76
F(4, 87)	28.03
Log-likelihood	52.63
Durbin-Watson	1.90
Observations	104
Sample	Monthly data Jan 2001-Aug 2009, all data real, All variables measured in logs, model includes monthly dummies

	Differences	coefficient	std. error
	Const	-3.62	1.15
	Change in passengers (t)	-0.34	0.43
A	Passengers (t-1)	1.17	0.15
B	Concession retail (t-1)	-0.91	0.10
	Long-run elasticity	A/-B= 1.29	

Mean dependent var	0.001
Adjusted R-squared	0.58
F(6, 84)	32.64
Log-likelihood	11.22
Durbin-Watson	2.04
Observations	103
Sample	Monthly data Jan 2001-Aug 2009, all data real All variables measured in logs, model includes monthly dummies

Car parking

Long-run model	coefficient	std. error
const	8.95	0.84
Passengers (t)	0.41	0.06

Mean dependent var	14.79
Adjusted R-squared	0.62
F(4, 87)	42.20
Log-likelihood	71.78
Durbin-Watson	0.85
Observations	104
Sample	Monthly data Jan 2001-Aug 2009, all data real
	All variables measured in logs, model includes quarterly dummies

	Differences	coefficient	std. error
	const	1.81	0.98
	Change in passengers (t)	0.34	0.11
A	Passengers (t-1)	0.12	0.05
B	Car parking revenues (t-1)	-0.24	0.08
	Long-run elasticity	A/-B= 0.50	

Mean dependent var	0.00
Adjusted R-squared	0.54
F(6, 84)	21.34
Log-likelihood	105.46
Durbin-Watson	2.43
Observations	103
Sample	Monthly data Jan 2001-Aug 2009, all data real
	All variables measured in logs

Property concession

Long-run model	coefficient	std. error
const	7.62	1.57
Passengers (t)	0.46	0.11

Mean dependent var	14.12
Adjusted R-squared	0.11
F(4, 87)	1.95
Log-likelihood	34.02
Durbin-Watson	1.59
Observations	92
Sample	Monthly data Jan 2002-Aug 2009, all data real
	All variables measured in logs, model includes monthly dummies

	Differences	coefficient	std. error
	const	6.43	1.82
	Change in passengers (t)	-0.09	0.60
A	Passengers (t-1)	0.35	0.12
B	Property concession rev (t-1)	-0.80	0.11
	Long-run elasticity	A/-B= 0.44	

Mean dependent var	0.01
Adjusted R-squared	0.38
F(6, 84)	4.96
Log-likelihood	35.68
Durbin-Watson	1.98
Observations	91
Sample	Monthly data Jan 2002-Aug 2009, all data real
	All variables measured in logs, model includes quarterly dummies

Property rental

Long-run model	coefficient	std. error
const	10.41	1.10
Passengers (t)	0.25	0.08

Mean dependent var	14.02
Adjusted R-squared	0.14
F(4, 87)	4.79
Log-likelihood	53.18
Durbin-Watson	1.89
Observations	92
Sample	Monthly data Jan 2002 - Aug 2009, all data real
	All variables measured in logs, model includes quarterly dummies

	Differences	coefficient	std. error
	const	8.62	1.62
	Change in passengers (t)	-0.11	0.18
A	Passengers (t-1)	0.27	0.08
B	Property rental revenues (t-1)	-0.90	0.10
	Long-run elasticity	A/-B= 0.30	

Mean dependent var	0.00
Adjusted R-squared	0.51
F(6, 84)	16.51
Log-likelihood	55.09
Durbin-Watson	1.97
Observations	91
Sample	Monthly data Jan 2002-Aug 2009, all data real
	All variables measured in logs, model includes quarterly dummies

ANNEX 3: Principles for rolling forward the RAB

A3.1 The RAB is the Commission's estimate of Dublin airport's regulated operating assets. When making a determination, the Commission sets a price cap that is intended to allow the DAA to earn a regulated rate of return. The price-cap calculation also includes an allowance for a return of the RAB, through an annual depreciation allowance. The higher the RAB, all other factors held constant, the higher airport charges will be.

A3.2 This annex sets out the principles the Commission will apply when rolling forward the RAB from one regulatory period to the next. The current Determination has been guided by these principles when determining the opening RAB. The Commission expects the principles to guide it at the time of the 2014 determination. By setting out these principles now, the Commission hopes that it will facilitate the efficient and economic development of Dublin airport by providing greater certainty about the likely regulatory treatment of future investments.

A3.3 While the Commission anticipates that these principles will guide how capex is treated at subsequent determinations, it is possible that particular circumstances will require the Commission to adopt an approach not specified in these principles. Nor does the Commission intend to retrospectively apply these principles to past determinations where the RAB was rolled forward. More generally, the Commission believes that revisiting past decisions about how to roll forward the RAB at every subsequent determination would undermine the benefits the Commission seeks to achieve with these principles. They are intended to give the airport operator greater certainty about how future regulatory determinations will allow past investments to be remunerated.

A3.4 This annex provides a stand-alone set of principles. A first draft of this annex was presented as Annex 1 to the Commission's draft determination. In responding to the draft determination several parties provided feedback to the original Annex 1. The main text of this final Determination discusses the feedback received and the Commission's response.

Function of the RAB

A3.5 The RAB is the Commission's estimate of Dublin airport's regulated operating assets. It represents the Commission's view of capital invested, as opposed to a list of the specific assets on the airport's balance sheet at any one point in time. As such, the RAB is not a fixed-asset account and there should be no expectation that it will always correspond to fixed-asset accounts retained by other parties, for example the DAA's own fixed asset register.

A3.6 How the Commission decides to allow the DAA to recover the costs of capital investments is central to the concept of a RAB. In effect, decisions relating to the RAB represent a "regulatory contract" between the regulator and the regulated company. One of the purposes of setting out the RAB principles in this annex is so that all parties can understand clearly the terms of this contract. It details how and under what circumstances the Commission will include allowances for a return on and a return of capital for past investments, as well as how the Commission will treat any asset disposals.

Calculating the value of the opening RAB

A3.7 There are two fundamental issues that need to be considered in rolling-forward the RAB from one regulatory period to the next:

- On what basis will the RAB be valued going forward?
- How will the value of the opening RAB from the beginning of one regulatory period to the next be adjusted for
  - (i) Depreciation;
  - (ii) New investment; and
  - (iii) Changes to the value of assets in the existing asset base?

Valuation basis of the opening RAB

A3.8 The RAB will be valued on an indexed historic cost basis. The historic cost of the investment refers to the allowance made by the Commission at previous determinations. The actual historic cost included in the opening RAB calculation will be subject to adjustments for depreciation, new investments and/or asset sales. These potential adjustments are discussed in the next section.

A3.9 The Commission will use the consumer price index to index the RAB. In determining a suitable return on capital, the Commission will seek to identify a cost of capital that is appropriate given that the RAB is indexed for inflation (or deflation). Allowing a real cost of capital approximates to what an investor is likely to require given that the principal will annually be adjusted for the effects of inflation.

Adjusting the RAB for depreciation, new investment and disposals

A3.10 Changes in the opening RAB from one period to the next reflect the impact of three factors:

1. Depreciation
2. New investment
3. Changes to the value of assets in the existing asset base, including, for example, the sale of existing assets.

Depreciation

A3.11 At the start of a multi-year regulatory period, the Commission sets a depreciation allowance for each year. This allowance is set having regard to the starting RAB and any expected new investment over the forthcoming regulatory period.

A3.12 The depreciation profile will reflect policy judgements by the Commission, made to ensure it meets its statutory objectives. As a general rule, the Commission will favour depreciation profiles that avoid the potential for significant spikes in the annual price cap depending on where in the investment cycle Dublin airport is at the time of a determination. The depreciation charges may not correspond to those that the DAA applies in preparing its statutory and regulatory accounts. At the next determination, the Commission will apply the depreciation profile outlined at the preceding determination.

A3.13 The Commission will also revise the RAB to account for changes in the CPI, and to account for new investments made and the disposal of any assets by the DAA during the period of determination just ending. The current Determination includes a judgement about how the RAB should evolve in the next five years given current investment needs at the airport. Should the actual level of investment deviate from the Commission's ex ante assessment, further adjustments to the RAB may be necessary. Similarly, adjustments will be necessary if the DAA disposes of assets. The extent of any such adjustments depends on the reasons for the divergence. This is the focus of the next two sections.

New investment

A3.14 At the start of each determination the Commission sets a capex allowance for the duration of the determination. If, at the end of the regulatory period, actual capex has not evolved as expected, the Commission may adjust the opening RAB used in the next determination.

A3.15 Whether the adjustment in the rolled-forward RAB is positive or negative depends on reason for out-turn capex differing to the amount the Commission "allowed" at the last determination. The tables on the following pages present a variety of "scenarios" where a divergence may occur and how the Commission would envisage rolling forward the RAB in each instance.

A3.16 In reconciling differences between capex "allowed" at the previous determination with out-turn capex, the Commission will focus on the outputs delivered and the expected and out-turn costs of delivering these outputs. It is the outputs that airport users ultimately care about. The Commission is keen to allow the DAA the flexibility to respond to changing market conditions and adapt its investment plans within a regulatory period, rather than having to stick rigidly to an investment plan agreed once every four-plus years.

A3.17 The focus on outputs means that in many cases the Commission may set a general allowance for a class of capex, while specifying in advance the expected output(s) associated with such an allowance.[43] So if the Commission allows €40m for stands and airfield projects, at the next

[43] Other economic regulators follow a similar approach. For example, the UK energy regulator Ofgem considers electricity distribution network investment under seven headings: *Demand*, *Diversions*, *Reinforcement*, *Fault Levels*, *Asset Replacement*, *Operational IT&T*, and *Legal and Safety*. Each category of investment has a specific and measurable output set against it. For example, in the case of *Fault Levels*, the regulator carries out an ongoing assessment of regional fault rates for each network operator.

determination it will review the reasons why the DAA's out-turn capex on such projects was not €40m (if indeed this proves to be the case). If the €40m was based on a number of projects in the DAA's CIP, the Commission may not seek to understand why each of those individual projects did not cost exactly as much as was projected if, in aggregate, the DAA's spent no more than €40m and it conducted all the stands and airfield works expected when the capex allowance was made. There will on occasion be large, specific projects (such as a new terminal or runway) with a clear output for which the Commission concludes it is inappropriate to group the costs with other capex.

A3.18 For this Determination, the Commission has identified eight projects groupings for capex in the period 2010-14. These are set out in the table below. In 2014, the Commission will also reconcile the out-turn costs associated with the T2 project with the amount allowed in the 2007 interim review.

Category
1. Airport Infrastructure - Airport Operations
2. Airport Infrastructure - Landside Infrastructure
3. Airport Infrastructure - Plant and Equipment
4. Airport Infrastructure – Utilities
5. Piers and Terminals
6. Revenue Projects – Retail
7. Revenue Projects – Revenue
8. Stands and airfields

A3.19 While this approach allows the regulated company flexibility in delivering a capex-related outputs within a given asset class or grouping, the Commission will monitor the provision of outputs so as to ensure that the original outputs as envisaged at the time of setting the capex allowance are delivered. In the situation where anticipated outputs have not been delivered and/or other, possibly unanticipated, outputs have been delivered, the Commission will seek to understand the reasons for the divergence before deciding on how to roll forward the RAB.

A3.20 The Commission's principles for rolling-forward the RAB under various scenarios are presented in the table below.

Scenario 1 - The investment delivers the expected outputs, but at a <u>lower</u> cost than allowed.
The regulated company may realise efficiency savings on given projects for a variety of reasons, both internal to the company itself (e.g. management efficiencies) or external to the company (e.g. a general fall in construction costs). Ordinarily, the Commission envisages the DAA retaining any such cost savings until the next determination. At that date, the opening RAB will include an adjustment to reflect project outturn costs. There will, however, be no clawback of the historic cost-savings

realised by the regulated company.

The length of time between setting the ex-ante capex allowance and reconciliation of this allowance with outturns will be one regulatory period, unless otherwise stated at the time of setting the capex allowance. At the time of setting the capex allowance, the Commission may indicate for some investments that it will defer the reconciliation exercise beyond one regulatory period. Deferring reconciliation in this way will increase the incentives for the DAA to realise savings in delivering the investment. A capital project expected to span a number of regulatory periods is one case where the Commission decide to defer reconciliation, since it would be difficult to reconcile allowed and actual spend at an earlier date given no final output would be expected at this stage.

Scenario 2 - The investment delivers the expected outputs, but at a higher cost than allowed.

As well as efficiency savings, there is also the potential for investments to come in over budget. The ex-post treatment of such costs will depend on the reasons for the project coming in over-budget. The Commission believes that there are three possibilities here:

- Over-budgeting resulting from changes in user-requirements;
- Over-budgeting resulting from factors outside the DAA's control;
- Over-budgeting resulting from factors within the DAA's control.

Changes in user requirements

If the investment is over-budget as a result of changes in user requirements over time, then the Commission will allow such costs to enter the RAB from the beginning of the following price control period, including an adjustment to allow for the return on this additional capital that the previous determination did not include. The Commission would expect supporting evidence from the DAA demonstrating that users were aware that the changes would result in higher costs and nevertheless supported the changed specification. In the case where not all users support a change in specification, then the Commission is unlikely to include the additional capex in the RAB unless the DAA is able to propose a pricing mechanism that ensures only those users who supported the investment proceeding are required to pay for it.

If the DAA is uncertain whether the Commission will approve a changed scope, it should either proceed with the original plan or wait until a subsequent determination and make the case then for a different capex allowance. It should not assume that the Commission will automatically approve retrospectively increased capex spend because of a changed scope. The DAA should only proceed with spending more than allowed when it is very confident it has support amongst all major stakeholders. The Commission can give no absolute guarantees about what level of general user support is necessary for it to conclude that an over-spend by the DAA should be allowed into the RAB on the basis of changing user requirements. It will assess the evidence at the time of the next determination but will generally favour sticking to the original allowance unless there are strong grounds for allowing the extra money spent.

There are potential gains to both the airport and users if parties are able to engage in constructive consultation and agree changes to the investment plans during a regulatory period. It will allow for much greater flexibility in responding to changing conditions. Absent general agreement from users for a change, the DAA's incentives will be to stick to the capex plan agreed at the time of the last determination. If parties are unable to consult on and agree changing capex needs within regulatory periods, then the airport's development will depend on decisions made by the Commission once every four-plus years on what capex needs there are.

Factors outside of the DAA's control

If the over-budgeting results from factors strictly outside of the regulated company's control then the Commission will allow such costs into the RAB from the beginning of the next determination. In the case where additional costs only become known as a project proceeds, the Commission would expect users to be informed by the DAA of any additional unforeseen costs. Users would then have the option of telling the DAA whether they still wish for the project to proceed. If users decide that they do not want the project to proceed on the basis of the new cost information, the Commission would be minded to allow capex already incurred to that date, in-line with the principles set out in Scenario 5 below.

The Commission will adopt a sceptical view of any claims by the DAA that additional costs should be allowed because they are outside the DAA's control. The original allowances include project and programme contingency costs. Moreover, the cost of capital allowance already implicitly includes an allowance for many of the risks associated with cost over-runs. Consequently, the Commission will not include general construction cost movements under this heading. The three occasions where the Commission anticipates that it might accept additional costs arise when there are

(i) unforeseen environmental costs;

(ii) unforeseen planning obligations/planning-related contributions; and

(iii) unforeseen safety or other legal obligations.

Even in these three instances, the Commission would expect to see evidence that the DAA kept users informed of the cost implications, especially if the increases represent a material increase in the total budget. When making a determination, both users and the DAA will have the opportunity to comment on the extent to which additional costs were or were not outside of the DAA's control.

Factors within the DAA's control

If the evidence suggests that the over-budgeting is because of factors within the DAA's control, e.g. mismanagement of the project or changes in specification without any consultation with users, the Commission will not allow the additional costs into the RAB at future dates.

When making a determination, both users and the DAA will have the opportunity to comment on the extent to which additional costs were or were not outside of the DAA's control.

Scenario 3 – The investment is not made and consequently anticipated outputs are not delivered.

Under this scenario the Commission would clawback all of the related capital costs through a one-off adjustment to the opening RAB at the beginning of the following price control period. The clawback will include interest earned on capital costs for which the DAA was remunerated during the determination, but for which the output was not delivered.

Scenario 4 – The investment does not deliver the outputs envisaged at the time of the original capex allowance, but instead yields a number of other outputs.

Scenarios 2 and 4 are closely linked. Scenario 4 deals with a situation where the output is completely unrelated to what was envisaged at the time the Commission initially made a capex allowance.

If the 'unplanned' outputs met the reasonable interests of users, and there is evidence of adequate consultation with users on such, the Commission would be inclined to allow the costs into the RAB. There would be no adjustment to the opening RAB at the beginning of the following regulatory period, assuming the actual spend was the same as allowed at the previous determination. (The Commission may review its decisions about what depreciation profile to assume for future determinations if, for example, the revised investment has a markedly different asset life.)

As with scenario 2, the Commission would expect supporting evidence from the DAA demonstrating that users supported the new output rather than what was initially envisaged when the capex allowance was made. In the case where not all users were supportive, the Commission unlikely to include the capex in the RAB unless the DAA can propose a pricing mechanism that ensures it recovers the costs only from those users who supported the investment proceeding.

If the DAA is uncertain whether the Commission will approve capex for different outputs, it should either proceed with the original plan or defer the investment until after the next determination when the Commission has had a chance to consult on the proposals and reach a final conclusion. The DAA should not assume that the Commission will automatically approve capex incurred providing outputs not envisaged at the time of the last determination merely because the DAA has incurred the expense. The DAA should only proceed with new projects not subject to regulatory scrutiny when it is confident it has support amongst all major stakeholders. The Commission can give no absolute guarantees about what level of user support is necessary for it to conclude that spend on outputs not envisaged at the time of the last determination will be allowed into the RAB. It will assess the evidence at the time of the next determination but will generally have a bias towards expecting the outputs to correspond to those envisaged when a capex allowance was made at the time of the last determination.

If the investment yields outputs that did not meet the requirements of airport users, the Commission would follow the same approach outlined in scenario 3. It would clawback all the related capital costs through a one-off adjustment to the opening RAB at the beginning of the following determination. Investments on outputs without a sufficient nexus to the airport would necessarily be deemed not to have met airport users' needs for the purposes of making a determination.

Scenario 5 – The investment was abandoned prior to completing all the work, such that some outputs were not delivered.

For allowed capex that remains unspent, the same approach as in scenario 3 applies: the Commission would clawback all of the related capital costs (return on capital and return of capital) through a one-off adjustment to the opening RAB at the beginning of the following price control period.

For allowed capex already incurred, the Commission would normally expect to allow the costs to remain in the RAB. This is despite the

> fact that the investment may ultimately have failed to deliver a beneficial output to users. The Commission believes that this approach provides better incentives for efficient investment decisions than alternatives such as disallowing all the costs. In particular, it avoids providing incentives for the DAA to complete projects when changing circumstances mean that the remaining costs exceed the net benefits of the project. It also allows the Commission to set a lower cost of capital than might otherwise be the case, since there is no need to compensate the DAA for the risk of obsolescence between the start and completion date for an investment.
>
> This approach provides the long-term regulatory commitment that is necessary if the DAA is to undertake large-scale, long-term investments at the airport. It is arguably consistent with the treatment that would arise if the DAA were to enter into long-term contracts with airport users to undertake infrastructure investments.

Changes in the value of existing assets in the RAB

A3.21 Finally, the Commission envisages two possible scenarios where changes in the value of existing assets might have implications for the RAB when rolling it forward. There are discussed in the following table and, following from the previous table, presented as Scenarios 6 and 7. In both scenarios it is assumed that parties act in good faith, and that decisions affecting assets currently in the RAB are not made merely to achieve a more favourable regulatory outcome.

Scenario 6 – An existing asset in the RAB becomes obsolete before the end of its assumed asset life.
'Obsolete' in this context means that, for whatever reason, airport users no longer get use from or the benefit of the asset in question. This could arise for a variety of reasons, such as shifts in demand patterns or new investment decisions by the regulated company that affect existing assets. It is important to note that the assumed asset life in question is that used by the Commission to depreciate assets in the RAB. The Commission will adopt a similar approach to that outlined in scenario 5. It will not normally reverse an earlier decision to remunerate investments just because of changed circumstances. If the investment was considered to represent efficient and economic development when it was made, then the DAA needs to know before undertaking the investment that the Commission will not subsequently reverse its decision and disallow the recovery of such costs. To adopt a different approach would require corresponding adjustments to the way that the Commission sets the cost of capital. Similarly, the Commission will not revise the RAB upwards in instances were an investment has a longer asset life than expected. Users will benefit from an asset that has a zero value in the RAB. Where the DAA undertakes a new investment that makes an existing asset in the RAB obsolete, it is assumed that the new investment was only allowed into the RAB because it provided a net benefit to users. It will be incumbent on the DAA to provide evidence of consultation with users of any such new investment, and that users are fully aware that the 'cost' of the new investment *includes* the potential for asset obsoleteness.
Scenario 7 – An existing asset in RAB is sold by the regulated company to a third party at a value that is different to the current/remaining value in the RAB.
Assets in the RAB can be sold by the regulated company at either a value less than, equal to or greater than the value currently attributed to that asset in the RAB. In all three cases the Commission reflect the sale value of the asset when rolling forward the RAB. This will apply whether the third party is independent of the DAA, or is part of the DAA group outside the regulated entity. For assets sold at *less than* the value in the RAB, the issues are similar to those for obsolete assets as described in scenarios 5 and 6. The Commission's approach corresponds to its approach in those two scenarios: the opening RAB would include an adjustment for the sale price (including clawback of capital costs between the time of the sale

and the setting of the new RAB), while the 'obsolete' element of the historical investment would remain in the RAB for the remainder of the asset life.

For assets sold at the value in the RAB, the opening RAB at the next determination will reflect the value of the transaction, including an adjustment to the RAB to repay remunerated capital costs (with interest) for the asset since the date of sale.

For assets sold at a price higher than the value in the RAB, the opening RAB at the next determination will include a capitalised adjustment for the value of the asset in the RAB at the time of the sale, including clawback for capital costs remunerated since the date of sale. The excess, with no claw back, will be netted from the RAB. This provides the DAA with an incentive to seek the highest sale price possible, while sharing the benefits between the DAA and users.

In all cases, as part of the next determination the Commission will independently review the asset sale to satisfy itself that the DAA realised a sale price at or close to prevailing market prices.

This approach to assets sales is symmetric. Airport users share from any gains or losses that are realised by such sales. Alternative treatments might create distorted incentives. For example, allowing the DAA to retain all of the revenues from selling an asset for a price that exceeds its value in the RAB might encourage the DAA to appropriate the net present value of a stream of commercial revenues. In a single-till environment, such revenues would have resulted in lower airport charges. By adjusting the RAB accordingly, the expected airport charges will be the same whether the sale occurs or not.

ANNEX 4: Debt-inflation shield

A4.1 Ryanair contends that there is a "debt-inflation shield" arising from the use of indexed depreciation, and the resulting cashflows lead to "excess profits" for the DAA. Ryanair provided three worked examples (A, B and C) to support this view.[44] In a subsequent meeting to discuss its submission, Ryanair asserted that the potential cashflow benefits arising to the DAA during inflationary periods – the debt-inflation shield – was a well known problem in regulation. Ryanair was unable to provide a specific reference to an approach that might resolve all Ryanair's concerns, although it did suggest in subsequent correspondence that the German energy regulator had identified limitations with applying a WACC to an indexed RAB.

A4.2 The Commission has decided not to adjust its approach in response to Ryanair's concerns about a debt-inflation shield. It refutes any suggestion that the Commission has ignored a well-known problem in regulation: an internet search using Google for the term "debt inflation shield" on 27 November 2009 yielded no links, other than to the Commission's website where Ryanair's response to the draft determination was hosted. Moreover, the Commission has spoken with a number of regulatory economists, none of whom were familiar with the issue Ryanair raises. More importantly, for a number of reasons the Commission does not accept Ryanair's argument that an adjustment to its depreciation policy is required:

- It appears to be based on a misunderstanding of the Commission's approach to regulation;
- It assumes that there is an arbitrage opportunity available because lenders systematically set nominal rates without regard to future inflation;
- The available evidence does not suggest that the DAA is necessarily earning excess profits; and
- It is possible to construct alternative examples to those provided by Ryanair that suggest, if Ryanair's logic was accepted, the Commission should revise the price cap upwards.

Approach to regulation

A4.3 One challenge for the Commission when making a determination is to set a price cap that allows the DAA to develop the airport in an economic and efficient manner to meet the needs of users. If a required investment is to take place, the Commission needs to make a sufficient allowance such that DAA is willing to invest. There are different payment streams that an investor might be offered, all of which would be acceptable to the investor. Some options would entail no indexation of the principal. Such options are likely to require a higher return on capital than if instead the principal was indexed. The attraction to the Commission of indexing the RAB is that the determination is specified in real terms, avoiding the need for the Commission to forecast future inflation rates.

[44] See Annex 1, Ryanair's response to the draft determination.

A4.4 The Commission sets the price cap so as to sustain the purchasing power of any capital allowance initially invested. If an investment is allowed for some amount €X, subsequent price caps are set such that the investor will receive the €X back after allowing for the effects of changes in the CPI. In the interim, while the investor is waiting for the money to be returned, the Commission also allows a return on the capital. It has to date concluded that a pre-tax real cost of capital represents a suitable cost of capital to apply. The table below provides an example, based on similar numbers to those used in Ryanair’s submission, that illustrates that this approach ensures that the calculations return to the investor, in real terms, the sum invested plus a real return on capital for the period it was invested.

		Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**
Capex	€1,000					
Real cost of capital	7%					
Annual inflation	4%					
Nominal cost of capital	11%					
Asset life (years)	5					
Inflation		4%	4%	4%	4%	4%
Opening RAB		€1,040	€865	€675	€468	€243
Capex	€1,000					
Depreciation		€208	€216	€225	€234	€243
Closing RAB		€832	€649	€450	€234	€0
Return on Capital		€73	€61	€47	€33	€17
Total revenues		€281	€277	€272	€267	€260
Present value of total revenues	€1,000					

Figure A4.1:Estimating required revenue streams to fund an investment

A4.5 Ryanair appears to be asking for the Commission to become more involved in how the DAA arranges the investment’s funding, to ensure that the DAA cannot benefit in cashflow terms by its mix of real and nominal debt and equity to fund the project. The Commission believes that the appropriate place to consider the appropriate capital structure is when determining a suitable cost of capital, not by altering the depreciation profile used.

Absence of arbitrage opportunities

A4.6 The premise that the DAA is able to benefit from a debt-inflation shield from issuing nominal debt appears to imply that the counterparty that issued the debt has set a rate of return without reference to future inflation rates.

A4.7 The DAA, in its response to representations by other parties, argued that it pays a higher interest rate on nominal debt than would be the case if the loan was repaid on an indexed basis. The Commission agrees. It is difficult to believe that nominal and real interest rates are always set such that lenders would always benefit from issuing nominal debt and taking advantage of the effects of inflation. The arbitrage opportunities would be too great for this to be a sustainable outcome.

Evidence on excess returns

A4.8 Ryanair's call for an adjustment in the price cap to address the so-called debt-inflation shield is partly derived from the belief that the DAA might be earning excess profits on an on-going basis. The table below shows the ratio of operating profit (before exceptional items) to assets in 2007 and 2008. Two measures of assets are included: the average RAB and the DAA's fixed assets as published in its accounts.

A4.9 The table shows that for the two years, the ratio of operating profit to assets is in the range of 5.8% to 9.2%. The average of these two figures is 7.5%, close to the regulatory rate of return of 7.4% used by the Commission in the second determination. The fall in profitability in 2008 is driven by two factors: a drop in operating profit driven by higher costs; and an increase in the value of assets corresponding to the large-scale capital programme currently underway at Dublin airport.

	2008 Dublin airport		**2007 Dublin airport**	
	Return on fixed assets	**Return on RAB**	**Return on fixed assets**	**Return on RAB**
Turnover	361	361	356	356
Opex & cost of sales	-238	-238	-228	-228
Depreciation-DAA	-46		-40	
Depreciation-CAR		-52		-49
Operating profit	77	71	88	79
Fixed assets	1,340		1,002	
Average RAB (including T2 assets in construction)		1,225		861
Op. Profit/assets	5.8%	5.8%	8.8%	9.2%

Table A4.2: Measures of DAA profitability

Source: DAA regulated accounts, Commission calculations.

A4.10 The results for Dublin airport are contrasted with the results for a sample of UK airports for the year ended 31 March 2008 in the figure below. The figure shows the ratio of operating profit to total fixed assets. The UK data are taken from the annual publication on airport statistics by the Centre for the Study of Regulated Industries at the University of Bath ("Airport Statistics 2007/08"). The average return for the UK airports in the sample is 8.2%; if Bristol airport is treated as an outlier the average is 7.2%. These figures do not suggest that Dublin airport is earning returns considerably in excess of UK airports, most of which are not currently subject to price-cap regulation or subject to a finding of having substantial market power.

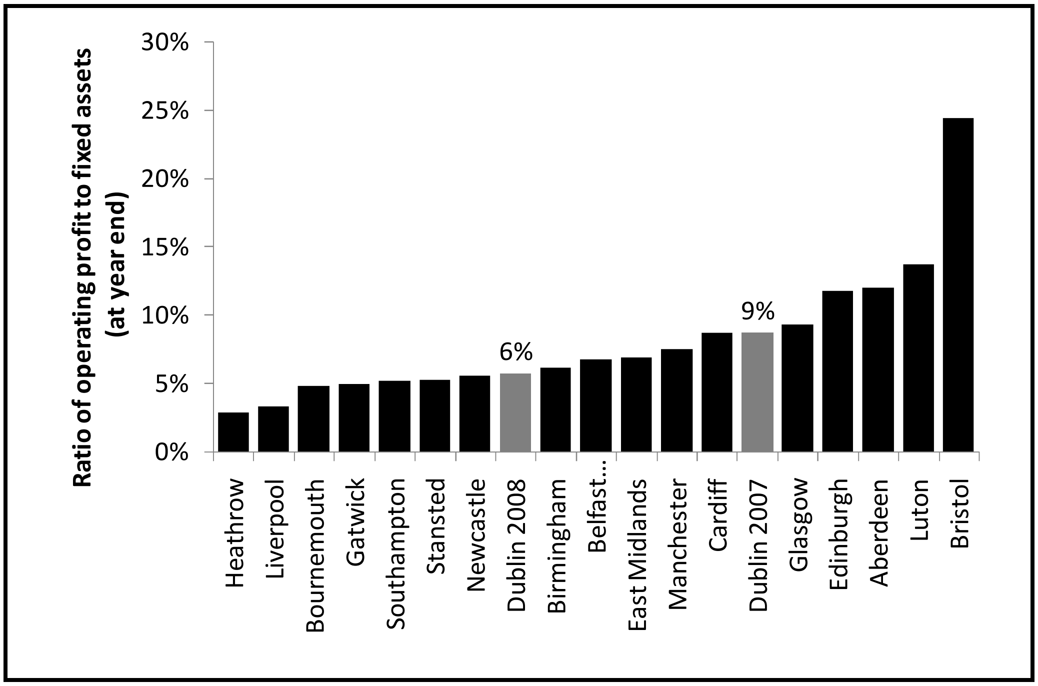

Figure A4.1: Ratio of operating profit to fixed assets for Dublin and a sample of UK airports

Source: Centre for the Study of Regulated Industries, University of Bath, Airport Statistics 2007/08

A4.11 The Commission does not believe the evidence supports Ryanair's concern that a debt-inflation shield might lead to excess profits at Dublin airport. The DAA, despite issuing nominal debt, is earning a return on the RAB roughly equal to the regulatory cost of capital. The evidence from the UK suggests that Dublin airport is not an outlier in terms of the return on assets earned in 2007 and 2008.

Alternative examples

A4.12 The examples that Ryanair includes in its submission generate results that show a return on equity that, for given assumptions, exceed the return on equity included in the Commission's estimate of the WACC. The findings are sensitive to the assumptions made, including the length of the loan and what form of depreciation is assumed.

A4.13 Ryanair assumes that the lifetime of the loan matches the assumed lifetime of the asset. In practice this may not be case. The table below assumes that there is a two-year loan but that otherwise the example uses the same assumptions as used in example B of Ryanair's submission. Just with this change, the finding of an excessive return on equity no longer holds.

A4.14 Second, Ryanair's example all assume simple straight-line depreciation. The Commission has not always applied such a depreciation profile, favouring in some instances annuities or unitisation. These approaches have often back-loaded revenues, which the DAA has claimed creates a mis-match between financing and revenues.

	Worked Example with Indexed Depreciation and 50% Debt Finance & Annual Loan Repayment 2-year Loan							
	Return of Investment		**Last Day Y0**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**
1	Opening Assets HC			1,000.00	800.00	600.00	400.00	200.00
2	Asset Purchased HC	(Given)	1,000.00					
3	Depreciation Straight Line HC	(Given)		200.00	200.00	200.00	200.00	200.00
4	**Closing Assets HC**		1,000.00	800.00	600.00	400.00	200.00	-
	Return on Investment			**Y1**	**Y2**	**Y3**	**Y4**	**Y5**
5	Unindexed Opening Assets	(Line 1)		1,000.00	832.00	648.96	449.95	233.97
6	Inflation	(Given)		4.00%	4.00%	4.00%	4.00%	4.00%
7	Indexed Opening Assets	Calculated		1,040.00	865.28	674.92	467.94	243.33
8	Indexed Depreciation = Return of Investment	Calculated		208.00	216.32	224.97	233.97	243.33
9	Indexed Closing Assets	Calculated		832.00	648.96	449.95	233.97	-
10	WACC	(Given)		5.70%	5.70%	5.70%	5.70%	5.70%
11	Return on Investment	(Line 8 x Line 10)		59.24	49.28	38.44	26.65	13.86
12	**Loan Account**		**Last Day Y0**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**
13	Opening Balance		0	500.00	250.00	-	-	-
14	Loan Finance Obtained		500.00		-	-	-	-
15	Loan Repayment, as defined			250.00	250.00	-	-	-
16	**Closing Balance**		**500.00**	**250.00**	**-**	**-**	**-**	**-**
17	Loan Interest Rate (Nominal)	Given		6.81%	6.81%	6.81%	6.81%	6.81%
18	Loan Interest Expense (Nominal)	(Line 17 x 16)		25.55	8.52	-	-	-
19	Return on Investment (Line11)	(Line 11)		59.24	49.28	38.44	26.65	13.86
20	Return of Investment	(Line 8)		208.00	216.32	224.97	233.97	243.33
	Cash in flows		**Last Day Y0**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**
21	Equity Raised		**500.00**					
22	Loan finance Obtained	(Line 14)	500.00					
23	Return on Investment, as defined	(Line11)		59.24	49.28	38.44	26.65	13.86
24	Return of Investment, as defined	(Line3)		208.00	216.32	224.97	233.97	243.33
	Cash Outflows							
25	Asset Purchased, as defined	(Line 2)	(1,000.00)					
26	Loan Repayments	(Line 15)		(250.00)	(250.00)	-	-	-
27	Nominal Interest Payments	(Line 18)		(25.55)	(8.52)	-	-	-
28	Return to Equity Holders							
29	**Net Cash flow to equity**		**-**	**(8.31)**	**7.09**	**263.41**	**260.62**	**257.19**
30	NPV Factor	11.8459%		1.1185	1.2510	1.3991	1.5649	1.7503
31	**Discounted cashflow**		**500.00**	**(7.43)**	**5.67**	**188.27**	**166.55**	**146.94**
32	**Actual Return to Equity**	11.8459%						
33	Required Nominal Return to Shareholders	12.5072%						
34	Excess Return on/of Investment	**-0.6613%**						

Figure A4.2: Worked example with indexed depreciation, 50% debt finance & annual repayment of a two-year loan

ANNEX 5: Capex allowance, 2010-2014

Project	Asset life and source		Allowance (€m)
CIP8.001 Operations	7	Capex meeting 29 May 2009	33.8
CIP8.008 Corporate IT	6	Capex meeting 29 May 2009	8.7
Airport Operations			**42.5**
CIP3.035 Internal secondary campus roads	20	DAA CIP	4.8
CIP3.033 Repairs to departure roads	20	Similar to CIP3.035	4.2
CIP3.012 Taxi holding area	20	Similar to CIP3.035	3.9
CIP1.016 Refurbishment of existing MSCP	10	Age of current assets prior to refurbishment	2.9
CIP3.034 External roads upgrade	20	Similar to CIP3.035	2.1
CIP3.014 Airside/landside perimeter fence	10	DAA response to draft determination	1.9
CIP8.300 Metro and GTC design fees	40	Capex meeting 22 April 2009	1.9
CIP2.008 Maintenance of listed properties	10	DAA response to draft determination	0.5
Landside infrastructure			**22.2**
CIP7.036 T1 life safety system upgrade	15	Capex meeting 29 May 2009	7.6
Piers and terminals			**7.6**
CIP4.014 Replace CHP2	20	DAA response to draft determination	3.2
Plant and equipment			**3.2**
CIP5.013 Retail refurbishments	5	Capex meeting 22 April 2009	10.6
Retail			**10.6**
CIP2.018 Cargo works	40	Apron works	8.0
CIP2.019 Retail logistics centre	10	Refurbishment project	3.0
Accommodation projects	9	Capex meeting 29 May 2009	2.9
Revenue			**13.9**
CIP6.017 Overlay runway 10/28	6	Capex meeting 06 May 2009	6.8
CIP6.052 Central apron reconstruction	20	DAA CIP	14.0

CIP6.018 North runway fees	40	Same as runway project	4.1
CIP6.055 B7 taxiway overlay	6	Capex meeting	0.8
CIP6.056 Apron road reconstruction	20	Similar to CIP3.035	1.7
CIP6.057 Airfield generator replacement	25	Information in CIP on similar existing assets	0.5
CIP6.009 Engine testing facilities fee only	40	Same as for engine testing project	0.2
Runway 11/29 refurbishment	6	Same as for CIP6.017	4.3
Stands and airfield			**32.4**
CIP9.024 Fuel farm redevelopment	40	Capex meeting 6 May 2009	13.9
CIP9.019 Divert & increase cuckoo culvert capacity	50	Capex meeting 29 May 2009	10.6
CIP9.022 Airfield pollution control	30	Capex meeting 29 May 2009	7.2
CIP9.021 Airfield drainage upgrade (3km)	50	Capex meeting 29 May 2009	2.9
CIP9.020 MV network renewal works A	40	Information in CIP on existing assets	2.4
Utilities			**37.0**
Programme contingency	20	Weighted average of projects	15.1
Programme management	20	Weighted average of projects	4.3
Programme management and contingency			**19.4**

Table A5.1: Capex allowance and assumed asset lives