Dublin Airport: Cost of capital for the 2026 determination

Aer Lingus

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DRAFT REPORT

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EXECUTIVE SUMMARY

This report has been prepared for Aer Lingus to inform its engagement with the Irish Aviation Authority (IAA) ahead of the 2026 Draft Determination on airport charges at Dublin Airport.

One of several factors that the IAA must give regard to when carrying out its functions as economic regulator is to set an appropriate Weighted Average Cost of Capital (WACC). The IAA has set out its initial thoughts on WACC issues (among other issues) for the upcoming regulatory period of 2027-2031, and Dublin Airport has prepared its own WACC estimate as part of its Regulatory Proposition.[1] We are submitting this report ahead of the IAA's Draft Determination for the 2026 decision to provide initial views on the appropriate approach and evidence base. The findings and recommendations in this report reflect the latest information we have reviewed. They may be refined following our review of the IAA's draft determinations.

In Table 1.1 below we summarise CEPA's independent view of Dublin Airport's WACC and estimates of each of the parameters comprising that WACC. For the cost of embedded debt, share of embedded debt, and tax, we have relied upon values provided by Dublin Airport as placeholder values. We expect further information on each of these to be available during the process and will update our view once that information is available. This report recommends a materially lower allowed return for Dublin Airport than the return proposed by Dublin Airport. CEPA's central estimate is a **4.26% real pre-tax WACC**, compared with Dublin Airport's proposed **6.11%**. The difference is not driven by one isolated modelling choice. It reflects our view that Dublin Airport's proposal overstates the risk faced by the regulated airport, particularly through beta, cost of new debt and the selection of a point estimate above the evidence-based range.

Table 1.1: Summary of IAA 2022 decision, DAA proposal, and CEPA recommendation on WACC

	IAA 2022 decision		Dublin Airport Reg. Prop.		CEPA current estimate	
Cost of new debt	1.29%		2.64%	2.90%	1.50%	2.12%
Cost of embedded debt	-1.16%		-0.47%		-0.60%	
Share of embedded debt	73%		48%		48%	
Issuance & liquidity costs	0.05%		0.30%		0.10%	0.20%
Cost of debt (pre-tax)	**-0.50%**	**-0.40%**	**1.46%**	**1.59%**	**0.59%**	**1.01%**
RfR	-0.85%	-0.06%	1.31%	1.83%	0.57%	0.72%
TMR	5.70%	6.81%	6.50%	6.90%	6.40%	6.90%
EMRP	6.15%	7.26%	5.19%	5.07%	5.83%	6.18%
Asset beta	0.59	0.61	0.61	0.67	0.46	0.56
Debt beta	N/A	N/A	0.00		0.075	
Equity beta	1.11	1.15	1.22	1.34	0.717	0.883
Cost of equity (post-tax)	**5.99%**	**8.29%**	**7.64%**	**8.62%**	**5.43%**	**7.36%**
Notional Gearing	45%	55%	50%		40%	
Tax	12.5%		16.10%		12.5%	16.1%
WACC (pre-tax)	**3.54%**	**4.04%**	**5.28%**	**5.94%**	**3.49%**	**4.82%**
Inflation adjustment			40bps		10 bps	

[1] Frontier Economics (2026) WACC for the 2026 determination. Submitted as Appendix 4 of the Regulatory Proposition.

	IAA 2022 decision		Dublin Airport Reg. Prop.		CEPA current estimate	
WACC (pre-tax, post infl.)	**3.54%**	**4.04%**	**5.68%**	**6.44%**	**3.59%**	**4.92%**
Selection of point estimate	4.35% (Midpoint + 50bps)		6.11% (Midpoint + 10bps)		4.26% (Midpoint)	

We agree with the IAA's broad WACC framework. It remains appropriate to estimate a separate cost of embedded and new debt, and to use the CAPM to estimate the cost of equity. We also agree in principle with using Dublin Airport's actual debt book for embedded debt, provided its costs can be subject to scrutiny. This requires sharing of the relevant data.

We think the IAA's focus should be on the cost of equity. Specifically, the IAA should carefully consider whether the proposed beta reflects Dublin Airport's actual systematic risk, whether 50% notional gearing is appropriate, and how it selects a point estimate for the WACC.

Beta is the most important area where the IAA should review its previous advice

Dublin Airport is a hub airport with a strong competitive position in Ireland. It operates under a single till framework, which mitigates its risk exposure from non-aeronautical activities. That framework reduces downside risk relative to dual till airports, where commercial revenues sit outside the regulated till. It also faces lower demand risk than many listed comparator airports and airport groups. These factors were not accurately reflected in the advice provided to the IAA for its 2022 determination, and the asset beta used in that determination is not a suitable reference point for Dublin Airport's prevailing risk exposure.

Dublin Airport's proposed beta overstates its exposure to systematic risk. The listed airport comparators used to estimate beta are mostly airport groups, often with international portfolios, non-core assets and dual or hybrid till arrangements. These characteristics expose the comparator airports to risks that Dublin Airport does not face to the same extent. Our recommended asset beta range of 0.46–0.56 draws on a similar empirical evidence base to that used by Dublin Airport, but gives appropriate weight to shorter-term post-pandemic data and recognises that Dublin Airport should sit towards the lower end of the comparator range.

The IAA's cost of debt approach is broadly appropriate, but assumptions need testing

CEPA does not disagree with the IAA's established approach of estimating embedded debt and new debt separately. Embedded debt costs are largely fixed, so using Dublin Airport's actual debt book can be reasonable. However, this approach has weaker incentive properties than a benchmark allowance. The IAA should therefore test the efficiency of Dublin Airport's actual debt costs against market evidence at issuance and over time.

For new debt, CEPA agrees that iBoxx EUR non-financial corporate bond indices provide a suitable benchmark. However, Dublin Airport's credit rating history casts doubt on whether BBB rated corporate debt is a relevant benchmark. Relative to Dublin Airport's regulatory proposition, we place more weight on A rated benchmarks and on shorter tenor debt that is aligned with the tenor of debt raised by Dublin Airport's peers.

The gearing assumption should not create artificial financeability pressure

The IAA has historically used a 50% notional gearing assumption, which Dublin Airport has used in its proposal. CEPA recommends 40%, which is better aligned both with Dublin Airport's actual gearing and that of listed airport comparators. Whilst the impact of gearing on the WACC is likely to be limited (provided the cost of equity is appropriately re-levered), we are concerned that a higher notional gearing assumption may generate artificial financeability pressures in the IAA's modelling.

There needs to be a strong case as to why the IAA should select a point estimate that is anything other than the midpoint of the range

The selection of a final point estimate should reflect a balanced view of all available evidence. Historically, the IAA has added an arbitrary 50 bps to the midpoint of its WACC estimate. We do not see any grounds for doing so in this determination. There is no reason to believe that the risk of measurement error is any greater in one direction than

the other: errors can overstate or understate the WACC. Indeed, some features of Dublin Airport's regulatory proposition (and the IAA's historic approach) – such as the benchmark index used for the cost of debt relative to Dublin Airport's own credit rating – are more consistent with a risk of overestimating the WACC.

In CEPA's view, the appropriate point estimate is the midpoint of the range of **4.26%.**

1. INTRODUCTION

Dublin Airport is a nationally significant transport asset, with strong demand and a central role in Ireland's international connectivity. It is subject to economic regulation by the Irish Aviation Authority (IAA), who sets the maximum level of airport charges through periodic determinations, with the next determination expected to cover 2027–2031. The determination uses a building blocks framework, including forecasts of efficient operating expenditure, capital expenditure, commercial revenues, passenger volumes and the allowed return on capital.

The allowed return, or weighted average cost of capital (WACC), is a core component of this framework. It determines the return that Dublin Airport can earn on its regulatory asset base (RAB), remunerating debt and equity investors for financing airport infrastructure. It must therefore balance two objectives: supporting efficient investment while protecting airport users from paying excessive charges.

This balance is particularly important for the 2027–2031 determination. Dublin Airport's Regulatory Proposition includes a materially larger capital investment programme than it has delivered in recent years, with proposed capital expenditure of €5.6bn over the period.[2] If approved, this would increase the RAB and make the allowed return a larger driver of airport charges.

The determination is also being set in a different market environment from the previous control. Bond yields have increased materially since the low-rate period that shaped earlier regulatory decisions. This affects the cost of new debt and may also influence investor expectations, which is particularly important given the relatively large weight on new debt in the cost of debt allowance.

The regulatory framework also applies a single till approach. This means that commercial revenues, including income from retail and car parking, are taken into account when setting aeronautical charges. The IAA has indicated that it expects to retain this approach for the 2026 Determination. This matters for WACC because the single till reduces the risk borne by the regulated business relative to airports where commercial revenues sit outside the regulatory till.

Against this context, CEPA's review focuses on providing the IAA with its view of an efficient WACC allowance, reflecting the latest information we have reviewed, which may be refined following our review of the IAA's draft determinations.

[2] Dublin Airport (2026) 2027-2031 Regulatory Proposition. Available online

2. COST OF DEBT

We first discuss the cost of debt allowance. This section first summarises the IAA's previous approach and that proposed by Dublin Airport (and its advisors, Frontier). Our approach and recommended estimate follows.

2.1. IAA PREVIOUS APPROACH - INTERIM REVIEW 2022 APPROACH

In 2022, the IAA's advisers estimated embedded debt using Dublin Airport's actual debt book. An actual approach was favoured for embedded debt to reflect the fact that embedded debt costs are largely fixed and cannot be re-priced to prevailing market conditions.

For new debt, the IAA used a benchmark approach, focusing on iBoxx EUR non-financial corporate (NFC) 10yr+ bond indices, using a 2/3rd weight on BBB and 1/3rd weight on A to derive a series reflective of a BBB+ entity. It also used forward yield curves in its estimation, increasing the benchmark yield by 0.14% to 0.33% (real).

To derive a real value from the above, the IAA used a mix of average historical German break-even inflation as well as market expectations from ECB survey data.

Regarding the share of new debt, the IAA assumed that 27% of debt over the regulatory period would be new debt, with the remaining 73% treated as embedded. This share was derived in relation to the expected actual debt structure of Dublin Airport, and its anticipated RAB for the 2022-2026 period.

The 2022 decision also included a 5bps issuance cost uplift intended to capture transaction costs of issuing debt, liquidity and administrative costs.

Table 2.1: Summary of cost of debt allowance for the 2022 determination

Component	Parameter
Embedded debt	-1.16%
New debt	1.29%
Share of new debt	27%
Weighted cost of debt (pre-uplift)	**-0.50%**
Issuance cost uplift	0.05%
Cost of debt allowance	**-0.45%**

Source: Swiss Economics report for Final Determinations for Interim Review in 2022.

2.2. DUBLIN AIRPORT'S REGULATORY PROPOSITION

Dublin Airport's advisers, Frontier, have also estimated a separate cost of embedded debt and cost of new debt for the 2026 decision.

For embedded debt, Frontier estimates a weighted average cost of debt over the regulatory period using a forward projection and amortisation profile of Dublin Airport's existing debt book, comprising a mix of bonds and loans. The nominal weighted average of 1.39% is then deflated using a fixed inflation assumption of 1.87% (discussed in the inflation section), leading to a -0.47% (real) cost of embedded debt.

For new debt, Frontier look at A and BBB NFC EUR bond from iBoxx for 10yr+, in alignment with IAA precedent. It focuses on a short term 6-month average of the index. The bottom end of the proposed new debt range is derived from an average of the A and BBB index, and the top end of the range is just BBB. A forward yield uplift is applied of between 0.61% and 0.81% to the nominal cost of debt, before deflating the values using 1.87%. This results in a real new debt cost of 2.64–2.90%.

Frontier estimates the average share of new debt at 52%, reflecting expected issuance and the maturity and amortisation profile of existing debt.

Frontier proposes a 30bps additional borrowing cost allowance, covering 5bps for issuance and 25bps for liquidity, RCF and carry costs, based on information provided by daa.

On issuance costs, Frontier calculate an annualised cost as the difference between "the IRR on the bond cashflows prior to fees – the yield at issue – and the IRR of the bond cashflows with the relevant deduction of fees". They estimate this to be worth 5bps.

Table 2.2: Summary of cost of debt allowance proposed by Frontier

Component	Lower bound	Upper bound
Embedded debt	-0.47%	-0.47%
New debt	2.64%	2.90%
Share of new debt	52%	52%
Weighted cost of debt (pre-uplift)	**1.16%**	**1.29%**
Additional borrowing cost uplift	0.30%	0.30%
Cost of debt allowance	**1.46%**	**1.59%**

Source: Frontier Economics report – Appendix 4 of Regulatory Proposition.

2.3. CEPA ANALYSIS

We follow the approach of estimating the costs of embedded and new debt separately

2.3.1. Embedded debt

For an embedded debt allowance, the IAA has the choice of whether to use a market index under a notional approach, or whether to reflect Dublin Airport's actual debt book. CEPA does not disagree in principle with the approach of using Dublin Airport's actual debt book as the basis for the allowance, as IAA has done in recent determinations. However, it should not go unchecked.

Estimates

In the absence of transparent data determining the calculation of embedded debt, we have taken the nominal weighted average cost of debt reported in the Frontier report, and deflated using our own forecast assumption of Irish CPI of 2.0%. (Section 8 on inflation provides further detail underpinning this assumption.)

Table 2.3: Placeholder value for cost of embedded debt allowance, 2027-2031

	2027	2028	2029	2030	2031	Average
Weighted average (nominal)[3]	1.39%	1.39%	1.38%	1.38%	1.40%	1.39%
Irish CPI estimate[4]	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Weighted average (real)	-0.60%	-0.60%	-0.61%	-0.61%	-0.59%	-0.60%

Source: Frontier Economics report, CEPA estimation, Central Bank inflation forecasts.

Issues

The IAA should address the weaker incentive properties that come with a more "pass-through" like allowance by assessing the efficiency of Dublin Airport's actual debt book against market data, over time and at the point of

[3] As reported in Table 3 of the Frontier report submitted as appendix 4 as part of the Regulatory Proposition.

[4] We have proposed a proxy value of 2.0% for Irish inflation over the next regulatory period. Latest Irish HICP forecasts (Q1 2026) from the Central Bank are 2.9% for 2026, 2.6% for 2027, 1.9% thereafter. Historically, Irish CPI has trended slightly above Irish HICP, therefore we believe 2.0% to be a conservative estimate.

issuance. Where Dublin Airport's actual debt costs are above the suggested market cross checks, the IAA should request Dublin Airport evidence reasons for the difference between an efficient market rate and their actual debt costs, and for Dublin Airport to make the case as to why these costs should be passed on to consumers.

We would also request the IAA increase the transparency of the calculation underpinning the embedded debt value. In particular, clarification of (a) the debt instruments considered in the calculation of embedded debt allowance in 2022; (b) characteristics and interest rate on existing debt portfolio today underpinning the embedded cost of debt weighted average number.[5] We expect these details to be included in the Draft Determination.

2.3.2. New debt

For new debt, we agree with the established approach of using benchmark market data (iBoxx EUR NFC bond yields). On tenor, a 10yr+ tenor may be reasonable given infrastructure asset lives and Dublin Airport's existing debt book. Our estimate also takes into account the equivalent 7-10yr benchmark series, as debt of this tenor is also consistent with the financing strategies adopted by peer airports.[6]

In the following sections we discuss specific issues concerning the appropriate benchmark credit rating and use of forward curve adjustments, before summarising our recommended approach and estimates.

Credit rating

Dublin Airport (or specifically daa plc) has successfully maintained a minimum A- credit rating consistently since 2015, even through periods of unprecedented demand shock. Previous to this, a weaker rating has only been observed during the global financial crisis.

The most recent S&P review (not full rating) continues to consider daa plc to be A rated with a stable outlook. It notes that a €2 billion capex programme would contribute to deteriorating cashflow metrics, but equally notes there is "significant" headroom in the current A rating, and alongside a strong liquidity position and strong forecast dividends, mitigates the financial impact of this capex spend: "We expect capex to increase in the coming years but we see headroom in the rating to accommodate it".[7]

While Dublin Airport is entering a period of high capex spend, we note this is being done against a back drop of a very strong Irish sovereign rating of AA+.[8,9] In S&P's latest note, we see that it considers the credit profile of Dublin Airport to be stronger with its Irish state ownership, than it would be considered as a standalone entity (S&P's stand-alone credit profile for daa would be BBB+ in a downside scenario), therefore a strong sovereign position would only strengthen daa's position.[10]

We also note that the strong credit rating for daa plc group reflects a range of activities. While Dublin Airport's activities make up a large share, daa plc also participates in other riskier activities such as Cork airport ownership and operation, retail businesses and car park management, as well as joint ventures in other international airports. An assumption that Dublin Airport's standalone rating may be stronger that daa plc group as a whole is therefore substantiated.

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[5] Including size of debt, tenor, interest rate including nominal or floating rate and any underlying reference rate used, type (bank or bond), date of arrangement.

[6] For euro denominated NFC bonds, iBoxx provide a series of 7-10yr remaining tenors, and then 10yrs+. The average years to maturity for these are around 8 years for both A and BBB series for 7-10yrs, and between 13.5 and 16yrs for 10yrs+. iBoxx does not provide a 10-15yr series for euro denominated NFC bonds like it does for GBP denominated bonds.

[7] S&P Global (2025) daa PLC Tear Sheet. 8th August 2025. Available online.

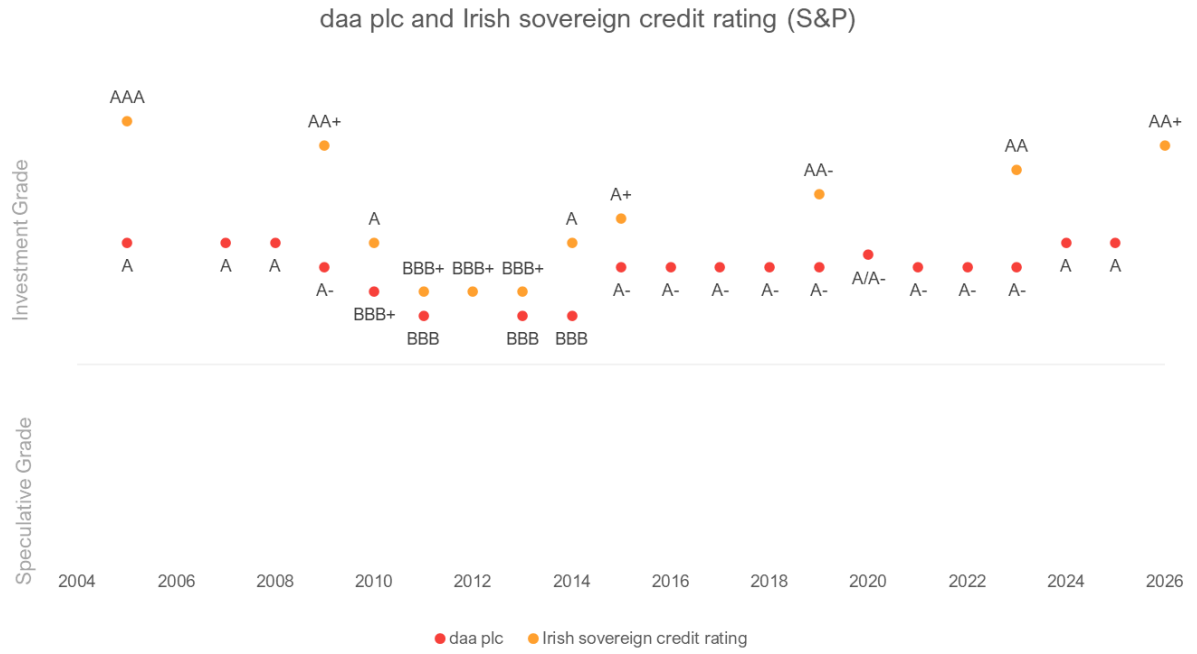
[8] S&P Global (2026) Ireland Upgraded To 'AA+' On Stronger Economic And Fiscal Profiles; Outlook Stable. Available online.

[9] While we focus here on S&P ratings to complement the IAA's focus on S&P for IAA, we note that the latest rating from Moody's is Aa3 in 2025, and AA from Fitch in 2025.

[10] S&P Global (2025) daa PLC Tear Sheet. 8th August 2025. Available online, page 4.

We conclude that an appropriate credit rating for Dublin Airport for the next regulatory period, and therefore one that best reflects the rates Dublin Airport would be able to achieve in the debt market, would be an A rating.

Figure 2.1: S&P ratings of daa plc and Ireland's sovereign credit rating over 20 years.



Source: S&P Global as quoted in IAA 2026 Issues Paper consultation,[11] CEPA analysis of S&P sovereign credit ratings[12].

Forward curve adjustments

We do not support the use of forward-rate uplifts. Forward curves have limited predictive power and can exaggerate the response to current shocks. We suggest an approach underpinned by short term averages of historical data.

We use spot rates for our estimates, but also place some weight on short term averages to minimise the impact of shocks or short-term volatility that may be captured in spot rates.

Our estimates

We present below averages of the nominal iBoxx EUR NFC series for both 7-10yrs and 10yr+ for both A and BBB rated entities, as well as a real equivalent rates. Given that our benchmark is European, we have deflated nominal values by the German breakeven inflation for each day of historical data and then taken averages of the real series.

As set out above, given its credit rating track record, the appropriate cost of debt allowance for Dublin Airport would put more weight on A rated debt than BBB rated. We would request the IAA consider how well the average years to maturity of the benchmark series align well with the tenor of the debt often raised and likely to be raised by Dublin Airport, as well as the tenor of debt typically raised by its airport peers. A blend of 7-10yr and 10yr+ evidence would be consistent with financing approaches in the sector generally.

Table 2.4: iBoxx average yields for A rated 10yr EUR NFCs

Data up to 31st March 2026		Nominal	Average 10yr breakeven inflation	Real
7-10yr A EUR NFCs	**Spot rate**	3.89%	2.24%	**1.61%**

[11] IAA (2025) 2026 Determination on Airport Charges at Dublin Airport: Issues Paper Consultation. Available online, page 106.

[12] Various S&P rating articles, for example from March 2026.

Data up to 31st March 2026		Nominal	Average 10yr breakeven inflation	Real
	1-month average	3.74%	2.21%	**1.50%**
	12-month average	3.46%	1.80%	**1.63%**
7-10yr BBB EUR NFCs	**Spot rate**	4.16%	2.24%	**1.88%**
	1-month average	3.99%	2.21%	**1.74%**
	12-month average	3.69%	1.80%	**1.87%**
10yr+ A EUR NFCs	**Spot rate**	4.30%	2.24%	**2.02%**
	1-month average	4.20%	2.21%	**1.95%**
	12-month average	3.96%	1.80%	**2.12%**
10yr+ BBB EUR NFCs	**Spot rate**	4.40%	2.24%	**2.11%**
	1-month average	4.28%	2.21%	**2.03%**
	12-month average	4.04%	1.80%	**2.22%**

Source: CEPA analysis of iBoxx data and Bloomberg for breakeven inflation assumptions

An approach similar to that taken by the IAA previously that places weight on both the 10yr+ series, and reflects a BBB+ rated entity would likely be towards the top end of a reasonable estimate. For our estimate, we put more emphasis on the A rated series for our WACC estimation, and conclude that a range of **1.50% to 2.12%** is supported by the data.

A key reason why the CEPA values sit below the values presented by Dublin Airport is because we do not place weight on forward yield curves.

2.3.3. Weighting approach

We agree that the share of new debt should reflect the average exposure over the control period, not a single end-period snapshot. To estimate the portion of new and embedded debt in the regulatory period, we would suggest the following approach:

- The IAA should align the size and timing of debt raising with the notional Dublin Airport RAB additions, determined under the Draft Determination and then final determination capex allowance as opposed to Dublin Airport's proposition.
- Net additions to the RAB should be assumed to be 60% equity financed and 40% debt financed to align with our notional gearing assumption.
- For embedded debt, this could be assumed to be refinanced either based on Dublin Airport's known maturity rates and profile, or could be assumed to be evenly refinanced over the length of average tenor in the benchmark series. The calculation should reflect the maturity of the €550m bond in June 2028 and any other bank debt maturities, unless the IAA adopts a notional refinancing profile.

Prior to publication of the Draft Determination capex allowance for Dublin Airport, so in absence of anticipated RAB values, we have used Dublin Airport's proposed share which is 52% new debt and 48% embedded debt. Any future WACC estimate should update the share of new and embedded debt to align with any update to the anticipated RAB values.

2.3.4. Issuance costs, liquidity costs, and cost of carry

We note that this section of Frontier's report is redacted and therefore we cannot comment on specifics of the requested size of the rates. We also would seek clarification from the IAA that the below costs are not being

provided for under an operational cost allowance or as a passthrough item (as can be seen by other regulators) as well as through the WACC.

Issuance costs

We do agree that Dublin Airport should be permitted to recover efficiently incurred issuance costs, and do not deem an estimate of 5bps to be unreasonable. IAA should clarify whether RCF issuance costs are considered included in this 5bps or are additional.

Cost of carry, Liquidity costs and RCF

We understand that Dublin Airport would need to maintain ongoing liquidity. We consider the notional company has a choice as to whether it uses draw downs on an external revolving credit facility (RCF), or through retaining cash deposits for its liquidity buffer, or a mixture of the two.

However, what is important is that customers are not expected to pay any fees where agreed rates are not efficient, and where rates are levied on excessively sized provisions. For liquidity costs, we request the IAA undertake an efficiency assessment of the size of the provisions included in Dublin Airport's calculation, as well as the rates requested. For example, we understand that Dublin Airport has access to a €450m RCF, but has not drawn down on this. While we are not suggesting that it should not have an RCF, we request the IAA to review (a) the need for an RCF; (b) the relative size needed for the RCF; and (c) the efficiency of the arrangement fees.

We also request the IAA consider whether it is correct that Dublin Airport requires both the full size of its RCF as well as the size of the cash reserves included in its Table 21 of its report, or whether combined, this is greater than it would reasonably need in an average year.

We also understand that Dublin Airport may incur a cost of carry. For cost of carry, we urge the IAA to consider whether it can conclude that this would always be in one direction, or whether it is equally likely that Dublin Airport could earn more than stated 1.85% on its cash reserves, and that a market index, e.g. overnight swap rate, is used.

Our estimates

Regulatory precedent from recent Irish regulatory decisions, as well as other European airports are summarised below. Dublin Airport's values sit materially higher than the regulatory precedent below.

Table 2.5: Regulatory precedent for additional borrowing costs

Regulatory determination	
CAA H8 Initial Proposals[13,14]	0.19%
CRU PR6 (Electricity system operator)[15] exclusive of RCF costs	0.10% to 0.20%
CRU PR6 (Electricity distribution and transmission) [16]	0.10% to 0.20%
CRU PC5 (Gas transmission and distribution)[17]	0.10% to 0.20%
CAA H7 Final Determination[18]	0.25%[19]

Source: CEPA review of recent regulatory determinations

[13] CAA (2026) H8 Initial Proposals, Section 3. Available online.

[14] Issuance costs of 0.04%, RCF set up costs of 0.01%, liquidity allowance of 0.12%, RCF liquidity allowance of 0.02%.

[15] CEPA (2026) PR6 Financial Issues: Onshore. Available online.

[16] CEPA (2026) PR6 Financial Issues: Onshore. Available online.

[17] CEPA (2025) PR5 Allowed Return. Available online.

[18] CAA (2023) Economic regulation of HAL: H7 Final Decision - Section 3: Financial issues and implementation. Available online.

[19] We note that the 25bps also provided for emergency liquidity facility costs.

We consider an overall allowance of between **10 and 20 bps** would be reasonable based on regulatory precedent.

2.4. CEPA RECOMMENDATION

Our approach set out above results in a real cost of debt allowance of between 0.30% and 1.08% for the upcoming regulatory period.

Table 2.6: Cost of debt resulting from application of CEPA's approach

	Lower bound	Upper bound
Embedded debt	-0.60%	-0.60%
New debt	1.50%	2.12%
Share of new debt	52%	52%
Weighted cost of debt	**0.49%**	**0.81%**
Additional borrowing cost	0.10%	0.20%
Cost of debt allowance (incl. borrowing costs)[20]	**0.59%**	**1.01%**

Source: CEPA analysis and Frontier report to inform values for embedded debt and share of embedded debt

[20] We have used German breakeven inflation for the deflation of the new debt allowance. We have used an estimate representative of Irish CPI for deflation of embedded debt allowance. Later in the paper we discuss an inflation adjustment to the WACC to account for differences between inflation assumption used in the WACC derivation compared to the RAB indexation. We have reduced the size of the overall adjustment to reflect the fact that an adjustment does not need to be applied to the embedded debt allowance. This overall cost of debt allowance therefore cannot be clearly labelled as German breakeven real or Irish CPI real.

3. BETA

This section again begins with a summary of the IAA's previous approach and Dublin Airport's proposals for beta, the key parameter within the cost of equity. We propose a number of material changes to the approach to estimating beta, which we summarise in Section 3.3.

3.1. IAA'S HISTORICAL APPROACH

To estimate an asset beta for Dublin Airport, in the 2022 Interim Review decision, the IAA, and its advisors Swiss Economics, proposed to use empirical estimation, using observed betas of a set of listed comparator airports/airport groups.

3.1.1. Comparator sample and relative risk

Swiss Economics opted to use a broad, weighted sample. It argued that a larger sample reduces estimation error and avoids over-reliance on volatile individual airport betas. It then weighted comparators according to relative comparability rather than making binary judgements about which airports were "in" or "out". The final sample comprised AENA, ADP, Auckland, Copenhagen, Fraport, Vienna and Zurich, with weights reflecting Swiss Economics' assessment of regulation, demand and business comparability. Several other comparators and regulatory precedent were considered but not included in the final comparator set. One of these was Sydney Airport, which was de-listed in 2022.

The Swiss Economics' relative risk assessment was not a separate mechanical uplift or discount to beta. Instead, it was embedded in the comparator weighting framework: airports judged more comparable to Dublin Airport receive higher weights, and weaker comparators receive lower weights.

The "star ratings" shown in the comparator table were not derived mechanically from a single quantitative model; rather, they reflected Swiss Economics' judgement across three broad categories of risk drivers:

- Economic regulation: Price-cap structure; interim review/traffic-sharing mechanisms; till structure; inflation pass-through; regulatory flexibility in shocks.
- Demand characteristics: Passenger volumes; aircraft movements; airport size; airline mix; passenger profile.
- Business characteristics: Regulated vs commercial revenue mix; diversification; international exposure; passenger-profit relationship; non-aeronautical activities.

Figure 3.1:Sample composition and weights as reported in Table 17 of the Swiss Economics WACC report (2022) [21]

	Economic Regulation	Demand	Business	Total	Resulting Sample Weight
AENA	★★★☆☆	☆☆	★☆	★★★★☆☆☆☆	15%
ADP	★☆☆☆☆	★☆	★☆	★★★☆☆☆☆☆	12%
AIA	★★☆☆☆	★★	★★	★★★★★★☆☆	23%
KBHL	☆☆☆☆☆	★☆	★★	★★★☆☆☆☆☆	12%
FRA	★☆☆☆☆	★☆	★☆	★★★☆☆☆☆☆	12%
FLU	★★☆☆☆	★☆	★☆	★★★★☆☆☆☆	15%
FHZN	★☆☆☆☆	★☆	★☆	★★★☆☆☆☆☆	12%

Source: Swiss Economics Final Report for 2022 Interim Review

[21] Swiss Economics (2022) Dublin Airport Cost of Capital for 2022 Interim Review – Final Report. Available online. p.51.

Figure 3.2: Empirical Asset Betas as reported in Table 18 of Swiss Economics WACC report (2022)[22]

	12-months / 1-year	22-months / 2-year non-pandemic	48-months / 5-year non-pandemic
AENA	0.72	0.70	0.71
ADP	0.58	0.52	0.68
AIA	1.06	1.01	0.87
KBHL	0.27	0.31	0.17
FRA	0.45	0.45	0.63
FLU	0.24	0.33	0.21
FHZN	0.64	0.62	0.70
Dublin Airport (weighted average)	**0.61**	**0.61**	**0.59**

Source: Swiss Economics Final Report for 2022 Interim Review

The weightings and asset beta estimates are challenging to interpret intuitively. Both Auckland (AIA) and Vienna (FLU) receive relatively high weightings, but their asset beta estimates are diametrically opposed to one another. This casts doubt on whether the approach to weighting achieves its intended purpose.

3.1.2. Treatment of Covid-19 period

Swiss Economics' position was that the initial market reaction to Covid-19 was likely to have overstated the effect on airport profitability: actual profit impacts were materially less severe and shorter-lived than implied by the fall in listed airport valuations, and later Covid waves produced much smaller stock-market reactions than the first outbreak. It also placed weight on the fact that the regulator's intervention for Dublin Airport was unusually timely and decisive, including interim reviews, suspension of certain penalties/clawbacks, tariff flexibility and government support. Swiss Economics therefore excluded 2020 as an anomalous period, but retained 2021 data on the basis that later Covid-related movements were more consistent with normal beta risk and contained relevant information about market risk perceptions.

3.1.3. Beta estimation approach

Consistent with the 2019 Determination, Swiss Economics estimated empirical asset betas for the comparator airports using 1-year, 2-year and 5-year beta windows, while excluding all 2020 data to remove the exceptional impact of the initial Covid-19 shock. Because the dataset ended on 31 October 2022, the 2-year estimate used 22 months of non-pandemic data and the 5-year estimate used 48 months of non-pandemic data.

The analysis used total return indices, with European airports benchmarked against the STOXX Europe 600 and Auckland benchmarked against the NZX 50.

Betas were estimated using a mix of daily and weekly data, then de-levered and re-levered using the Hamada formula, based on market values of equity, book values of net debt and effective tax rates. The resulting weighted comparator estimates produced an asset beta of 0.59-0.61, midpoint of 0.60 and an equity beta midpoint of 1.13.

The IAA have historically used the Hamada formula, not requiring a debt beta assumption.

3.2. Dublin Airport Regulatory Proposition

Frontier estimates a beta using OLS regression to calculate observed empirical betas for airport comparators/groups, subject to liquidity screening and judgement on comparability. It excludes Vienna,

[22] Swiss Economics (2022) Dublin Airport Cost of Capital for 2022 Interim Review – Final Report. Available online. p.52.

Copenhagen and Auckland on liquidity grounds, leaving AENA, ADP, Fraport and Zurich as the core comparator set.

It estimates betas over 2-year, 5-year and 10-year windows using both daily and weekly data, and makes no adjustment for Covid-19 observations in its 10-year estimation window. Frontier considers this better reflects investors' forward-looking assessment of airport risk following the pandemic.

Frontier de-levers comparator equity betas using the Harris-Pringle formula with a zero debt beta, then re-levers the resulting asset beta using Dublin Airport's notional gearing (assumed to be 50%). It adopts an asset beta range of 0.61–0.67, which produces an equity beta range of 1.22–1.34.

3.3. Discussion of appropriate approaches

Given the large number of decisions and judgements to be made, in this section we summarise each in turn, beginning with a summary of the main characteristics of Dublin Airport from the point of view of risk exposure.

3.3.1. Dublin Airport's characteristics and risk

In theory, the estimation approach should result in a beta that reflects Dublin Airport's systematic risks. We have summarised the drivers of risk in Dublin Airport's characteristics below.

Dublin Airport is a **hub airport.** It functions as Ireland's principal aviation gateway and an important transfer airport for transatlantic traffic, supported by extensive route connectivity. It is **well connected to prosperous markets**, including the UK, continental Europe and North America. These links support a mix of business and leisure travel. This diversification reduces exposure to any single traffic driver and supports resilience through the cycle.

Dublin Airport faces **limited competition from alternative transport modes**. For many international journeys to and from Ireland, air travel is the only practical option. Unlike some mainland European airports, Dublin is not exposed to substantial substitution from high-speed rail or road alternatives on core international flows. This limits downside risk to passenger volumes from modal shift.

Traffic risk is further moderated by **strong demand**. Where demand is high and robust – and particularly if the airport is capacity constrained – traffic volumes are less exposed to short-term changes in demand from airport pricing or service quality, or external factors than at airports with spare capacity and more marginal demand. In addition, while Dublin Airport's traffic has seasonal fluctuations, it has shown steady growth over time. This supports a view that Dublin Airport benefits from low traffic volatility and resilient long-term demand. Although the Regulatory Proposition would increase airport capacity over the regulatory period, meaning there is now a weaker case for excess demand, this does not materially change the conclusion, which is supported by historical evidence of resilient demand and strong growth.

Dublin Airport's market position is **sufficiently strong to require economic regulation**. This is relevant to the assessment of risk because market power reflects limited exposure to competitive pressure in comparison to airports that do not require regulation. Dublin Airport is significantly larger than the next largest airport in the country.[23]

Dublin Airport is subject to **single-till regulation**, which is lower risk than dual-till regulation. Under a single till structure, investments in commercial (i.e. non-aeronautical) activities are not fully exposed to risk. This is because under the regulatory framework the IAA will forecast and deduct commercial revenues from the overall revenue requirement at each reset. By contrast, under dual till regulation, the valuation of non-aeronautical activities incorporates the full stream of expected future profits. While risk equivalence exists during the price control period, there is a significant divergence in risk beyond the current control, as future commercial cashflows under dual till

[23] Dublin Airport in 2025 served 36.4m passengers, compared to 7.1m served by the four other main airports in Ireland, equivalent of 84%. CSO (2025) Aviation Statistics 2025. Available online.

influence beta assessments. Given that a five-year control typically has around 2.5 years remaining at any point, variations in commercial cashflows beyond this horizon affect the measured beta.

3.3.2. Assessing relative risk

It is not an easy challenge to capture risks in a beta estimation using comparator evidence, and regulators and academics are not agreed on one correct approach.

Ideally, a comparator set would reflect the characteristics outlined in Section 3.3.1, however, the availability of data for listed companies is limited. There are a number of limitations with the data: in particular, there are no listed single till comparators and there is only limited availability of listed hub airports absent of statistical issues. Relying on a sample of comparators with robust measurements may not reflect the risks of Dublin Airport.

One possible approach would be the weighted average approach applied by the IAA in the 2019 and 2022 determinations. However, our view is that this approach inappropriately attempted to capture Dublin Airport's risk by placing it somewhere within a set of comparator airports without appropriately capturing the differences between Dublin Airport and the comparator set itself. It also omitted important risks such as traffic/demand risk, focusing on size measures of traffic as opposed to volatility. From applying this approach in the 2022 determination, the IAA most heavily weighted three airport companies including the highest beta, the lowest beta, and one in the middle of the pack, which also made drawing inferences difficult.

A more appropriate approach would be to draw an initial range from a statistically robust set of comparator beta observations, and make explicit adjustments to the empirical observations reflective of differences in risks that between the comparator set and Dublin Airport. This is the approach CEPA supports.

We set out our comparator set below, but consider the three most important differences between this set and Dublin Airport to be:

- Traffic risk: traffic volatility is a driver of demand risk for airports because fluctuations in passenger volumes are linked to broader economic conditions and other systematic factors. Higher traffic volatility indicates greater exposure to demand risk, which in turn contributes to a higher asset beta. Conversely, airports with more stable passenger numbers face lower demand risk and therefore tend to have lower systematic risk. From a regulatory and financial perspective, recognising differences in traffic volatility across airports is essential to accurately assess relative risk.
- Single v dual till: The comparator airports are subject to dual till regulation. Their observed betas therefore reflect the risks of both aeronautical and non-aeronautical activities. In contrast, for a single till airport, the appropriate beta is expected to be lower than the weighted betas of dual till comparators, for reasons explained above.
- Hub v group: It is important to recognise that when comparing the asset betas of airport groups, whose operations span multiple geographical locations, to the regulated single hub airport like Dublin, we may inadvertently be capturing risk from a wider range of markets and conditions.[24] This makes it essential to understand where traffic volatility resides within the comparator groups. In the case of Dublin, its main comparators (AdP, Fraport, and AENA) are airport groups with both core airports and non-core or international airports. These different components exhibit varying levels of volatility, with core airports generally showing much more stable passenger volumes. Therefore, using an empirical asset beta derived from a group's consolidated operations risks overstating Dublin's relative risk, as it reflects exposure to higher volatility, non-core assets. An appropriate downward adjustment should be applied to account for these structural differences in composition and risk profile.

[24] While we understand Dublin Airport is owned by daa plc, the focus here is on regulating the individual Dublin Airport itself, hence why we refer to it as a single hub airport.

3.3.3. Comparator set

Starting with the comparator set included in the 2019 and 2022 determination, we share Dublin Airport's criticisms of the inclusion of companies with betas that are not statistically robust (illiquid, high bid-ask spread, small number of floated shares) at this point in time. We find issues with recent estimates of betas from the following airports/groups, similar to Frontier's view in the Dublin Airport proposition:

- AIA: Auckland airport currently displays unnaturally high and unstable betas when regressed against a local NZ stock market index, potentially due to index circularity as it makes up a large component of the overall stock index. Some regulators have previously regressed it against an Australian index to avoid this circularity, however this raises currency mismatch issues and results in beta estimates that are entirely different to those based on a local index.
- FLU: Vienna airport has recently exhibited frequent instances of negative beta values. We find it difficult to draw inferences about the relative risk of this airport from negative values, and therefore propose exclusion of this comparator at this point in time.
- KBHL: Copenhagen airport currently has a very low proportion of its shares traded on the stock market, and a small amount of stock available to trade, meaning the share price is not revealed on a frequent basis. We are of the view that this could lead to unreliable beta estimates.

We treat AENA, AdP and Fraport[25] as the main comparators for Dublin Airport because they are large, listed European airport groups.[26] Zurich is a materially weaker comparator. Zurich's revenues are denominated in Swiss Francs; comparison to a European index introduces complexity to interpretation thanks to relative movements in currency values. Estimates based on a national relative index reduce its beta significantly. If Zurich were to be used, we would recommend a lower weight placed on these observations.

We consider several airports as additions to the comparator set. Bologna has been included as a comparator by the ART in France for its determination on Paris airports, passing liquidity tests and being viewed as relevant.[27] At this stage, we propose it as part of our cross checks, but encourage the IAA to consider it as an addition to the core sample set. We also consider two further airports as cross-checks, but where data is not available for a wide time series. These are Athens airport (listed in February 2024) and Sydney airport (de-listed in 2022).

3.3.4. Estimation approach

Theory does not point to one correct estimation approach. The challenge is in using judgement, to identify a proportionate approach to deal with differing issues, while giving some consistency over time.

Previously, the IAA has used OLS estimation on 1yr and 2yr daily and 5yr weekly betas. Applying an OLS estimation to periods of time that include just a handful of covid-impacted data points (particularly lockdown announcement and vaccine announcement) creates an upwards bias and largely overstates the impact of these shocks in a long period estimate. While the IAA did exclude 2020 values and considered these to be covid-impacted, this approach required subjective assessment to identify and decide on the inclusion/exclusion of data points.

The appropriate empirical method depends on two questions:

- First, should the true beta be treated as constant over time, or have airport betas changed materially?

[25] The equity used here is FRA GR. A sensitivity analysis exploring the alternative FRA GY can be found in the Appendix.

[26] The limitations of this comparator choice have been somewhat described in the relative risk section. In particular, AENA, AdP, and Fraport operate diversified portfolios of airports rather than a single hub like Dublin Airport. As a result, their group betas may be less representative of a standalone hub airport, and their greater exposure to non-home airports could increase their relative risk compared to Dublin Airport

[27] ART (2026) Avis Simple CRE 2027-2035

- Secondly, are the regression results materially distorted by high-leverage observations or outliers?

Our preferred approach is to seek to understand the most likely drivers of variation in beta estimates over time – which may include statistical noise and a disproportionate impact of outlier observations – and reach a judgement as to the measurements that are most likely to be reflective of forward-looking conditions. We would encourage the IAA to also use objective and symmetric methods to reduce the effect of influential observations, rather than relying on unadjusted OLS or subjective exclusion of individual data points. We therefore propose three possible approaches:

- The IAA could place greater weight on short-term spot OLS estimates, particularly 2-year and 5-year estimates.
- The IAA could use robust regression techniques. These methods apply transparent rules to reduce the influence of high-leverage observations.
- The IAA could use time-varying beta models, such as GARCH. A GARCH model directly reflects changes in volatility in company and market returns, and is therefore well suited to periods where risk conditions have changed.

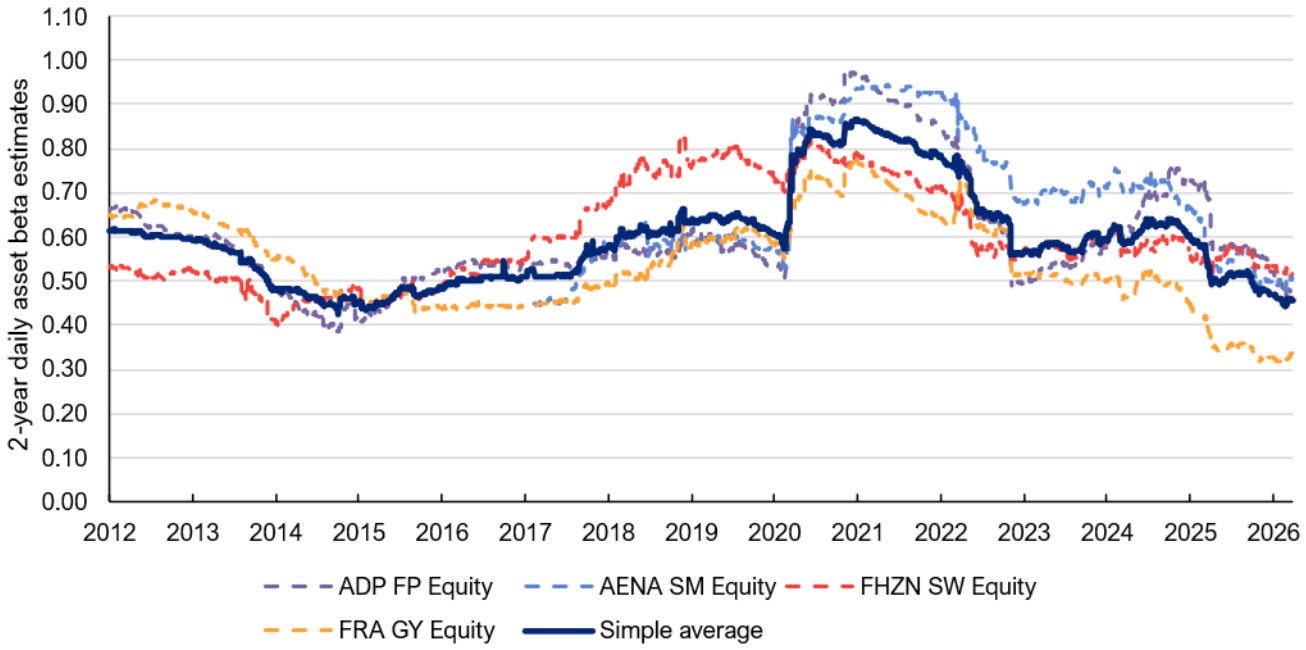
While we encourage the IAA to explore this full range of estimation approaches going forward, we also note the importance of regulatory precedent and having stability and predictability in the framework. A second best approach could be to use longest non-covid impacted period, in this case 5yr estimation window. We are of the view that this period still captures investors' perceptions of covid risk (recent memory), but without capturing impacted data itself, and providing some consistency in approach over time. It also avoids the subjective assessment of data points for Covid-19 impacted data by avoiding the time range, however it does not avoid the debate for data points driven by other shocks. This second best approach can be supplemented with a long-term view of short-term estimates, as is explored below.

We do not support use of a 10yr OLS estimate without use of robust regression techniques.

3.4. COVID-IMPACTED DATA

It is widely understood that the COVID-19 pandemic and associated global restrictions on travel had a disproportionate impact on airport business models. We present below a chart that shows the sharp and short-lived increase in 2-year beta estimates for listed airports from a handful of impactful data points.

Figure 3.3: Rolling 2-year daily asset beta estimates for the four main listed airport comparators



Source: CEPA analysis of Bloomberg data

3.4.1. Core and secondary comparator set

We consider the core comparator set, for reasons explained above, to be AENA, Fraport, AdP and – with caution as to its weighting – Zurich. We have also regressed European airports and airport groups against the STOXX Europe 600.

We find these airports form a statistically robust set of comparators, from which reliable beta estimates can be made. This view is also commonly recognised by other regulators, as well as Dublin Airport, suggested by the Frontier Appendix 4 submitted to the IAA as part of the Regulatory Proposition.

Initially we present beta estimates based on OLS regression.

Table 3.1: Comparator set - short-term spot OLS regressions

	AENA	AdP	Fraport	Zurich	Simple average (incl. Zurich)	Simple average (excl. Zurich)
2yr asset beta	0.50	0.45	0.35	0.48	**0.45**	**0.43**
5yr asset beta	0.65	0.51	0.47	0.60	**0.56**	**0.54**
10yr asset beta	0.76	0.69	0.59	0.68	**0.68**	**0.68**

Source: CEPA analysis of Bloomberg data, cut off date 31st March 2026

We have concern over use of a 10yr OLS estimate without any adjustment for outlier values, which can carry an undue amount of weight in our beta estimates, but also appreciate that the IAA may wish to reflect longer term beta trends. One way to capture variations over a longer period of time is to look at long term average of short-term windows. In this case, we have looked at 10yr rolling average of 2yr betas and looked at the median value of this period.

Table 3.2: Comparator set - long term average of short-term betas

	AENA	AdP	Fraport	Zurich	Simple average (incl. Zurich)	Simple average (excl. Zurich)
10yr rolling average of 2y beta[28]	0.58	0.67	0.60	0.55	**0.57**	**0.60**

Source: CEPA analysis of Bloomberg data, cut off date 31st March 2026

However, we have also suggested robust regression techniques, expanded on in Appendix A. We have set out a variety of robust regression techniques to assess beta and control for the distortionary impact of outliers on unadjusted OLS regressions. The robust estimation techniques particularly highlight that the 10yr OLS value of 0.68 overstates the value of beta.

Table 3.3: Robust regression results, as of end-March 2026 cut-off.

	Spot beta - simple average (incl. Zurich)	Robust regression delta	'Corrected beta'- simple average (incl. Zurich)
2yr asset beta	0.45	+0.01	**0.46**
5yr asset beta	0.56	+0.00	**0.56**
10yr asset beta	0.68	-0.07	**0.61**

Source: CEPA analysis of Bloomberg data, cut off date 31st March 2026

The measures give a broad range of **0.46 to 0.61** for the asset beta.

3.4.2. Relative risk adjustment

Adjustments for risks not reflected in comparator set

As set out above, the limitation of focusing on these four more resilient data estimators (noting the limitations of Zurich raised in this paper), is that the resulting betas are representative of airport groups, with dual/hybrid till risk, and high traffic volatility. They are not reflective of Dublin Airport specific risks. To reflect the differences, we propose to make use of an explicit adjustment.

Traffic volatility

It is important to recognise that when comparing the asset betas of airport groups, whose operations span multiple geographical locations, to that of a single airport hub like Dublin, we may inadvertently be capturing risk from a wider range of markets and conditions. This makes it essential to understand where traffic volatility resides within the comparator groups. Dublin historically has shown steady growth year on year, with low levels of volatility (excluding 2020-2023 which we consider covid-impacted).We present here evidence on traffic volatility, which supports a downward relative risk adjustment from the three group airports, AENA, AdP and Fraport. CEPA have presented similar arguments in engaging with the CAA for H8, and this is consistent with the approach undertaken by PwC for the CAA at the start of H7.[29]

[28] We created a 10yr rolling averages of 2y daily betas for each comparator from 31st March 2026 to 31st March 2016 (31st March 2016 value back to 2006). This value is a median of these datapoints

[29] PwC (2019) Estimating the cost of capital for H7 - Response to stakeholder views. Available online. p.64 onwards.

Table 3.4: Dublin and airport group traffic volatility measured as the std. dev. of changes in passenger traffic volumes[30]

Core / Non-core	Dublin	AdP	Fraport	AENA[31]	Zurich
Non-core airports	3.6%	14.4%	10.9%	24.1%	2.7%
Core airports[32]		2.8%	2.2%	6.1%	

Source: CEPA analysis of passenger figures published by the airports/groups

The analysis shows three things:

- Dublin Airport has materially lower traffic volatility than the comparator airport groups;
- the core airports have materially lower volatility than the non-core airports within those groups; and
- a focus on group beta measurements, unadjusted, will tend to overstate the risk faced by the core airports – and, by extension, Dublin Airport.

The key point is not simply airport size. It is that the non-core assets within the comparator groups tend to have weaker competitive positions and higher traffic volatility. This is relevant to the risk reflected in the listed group betas.

Till structure

Using observed betas of dual till airports (groups) reflects both the risks of both aeronautical and non-aeronautical activities. In contrast, for a single till airport, the appropriate beta is expected to be lower than the weighted betas of dual till comparators, for reasons set out above.

The IAA has adopted the following position in its Issues Paper for the 2026 determination:[33]

"*A single till approach is more credit protective by reducing volatility, lowering downside but also limiting upside*."

Making reference to S&P Global Ratings: [34]

"[the single till] provides more certainty to returns and earnings, and is generally considered as more credit protective by reducing volatility, lowering downside but also limiting upside."

However, the IAA did not make an explicit adjustment in its previous determinations to reflect this difference. All of the comparator airports considered in its sample are subject to dual till regulation (or some hybrid till), and therefore the weighted average approach employed by IAA previously cannot result in a beta number based on single till regulation.

Cross-check empirical betas

Other airports outside of those listed can be informative for Dublin Airport, and reduce the reliance on large, diversified airport groups. Their addition also focuses on comparator selection more towards European hub airports, reducing reliance on non-European comparators. We have proposed three airports that are national airports not included in IAA's previous core set:

[30] The traffic statistics in this table span the period from 2013 to 2024, although data is not available for every year. We exclude 2020–2022 as pandemic years, and 2023 as its sharp rebound in traffic could distort the results. Furthermore,

[31] The AENA non-core group includes Luton, ANB airports (Brazil), and Spanish airports excluding Madrid and Barcelona.

[32] For AdP we use Paris airports, for Fraport we use Frankfurt, and for AENA we use Madrid and Barcelona airports.

[33] IAA (2025) 2026 Determination on Airport Charges at Dublin Airport: Issues Paper Consultation. Available online.

[34] S&P Global Ratings

- **Athens airport** While 5yr betas are not possible to estimate due to the airport only being listed in February 2024, the 2yr betas spot rate at end of March 2026 is 0.45. A one year and two-year average of 2yr daily betas sit lower, both at 0.38.
- **Sydney Airport** provides high-quality historic market evidence and was removed only because of delisting, not because of concerns over comparability. Sydney airport betas have previously been characterised as around 0.33 to 0.54 by the IAA[35]. At the point of being delisted in March 2022, CEPA observes Sydney airport's beta to be around 0.55 for the 2yr daily spot rate.[36]
- **Bologna Airport** is a hub airport that is listed with observable market data, closer in scale to Dublin Airport than the other groups in the comparator set. It is essentially a more "pure-play" comparator given it is a standalone airport operator and does not own a broad international airport portfolio; and its equity value is driven primarily by one airport.[37] The French airport regulator, ART, considered it to be sufficiently liquid to include as a comparator in its most recent estimation of a WACC for AdP. At end of March 2026, Bologna's 2yr daily spot rate was 0.20, and the 5yr weekly at 0.43.

Directionally, these observed betas sit towards the lower end of, if not below, the range drawn from the main beta comparator set.

Proposed adjustment

We have set out three cases as to why Dublin Airport's beta would sit towards the lower end of the comparator range:

- Airport group betas reflect higher levels of traffic volatility than their main/core airports and higher traffic volatility than Dublin Airport;
- Dublin airport, being a single-till airport is lower risk than the dual/hybrid-till airports included in the comparator set;
- A secondary set of airport betas point towards an empirical estimate that is lower than the core four airports suggested by Dublin Airport

We propose an adjustment in the region of 0.05.

While this is unavoidably judgement-based, the IAA have agreed in principle to some of the qualitative arguments raised above, which we have sought to quantify where possible. We note that the IAA has previously made subjective assessments historically when assessing the beta estimates and estimating the WACC. We view our proposed adjustment as no less subjective than the assumption that Dublin Airport's risk exposure corresponds precisely to that of three airport groups with diverse airport interests.

3.4.3. CEPA recommendation

The empirical data suggests a beta range of 0.46 to 0.61 with robust regression (including Zurich).

We propose an asset beta range of **0.46 to 0.56**, towards the lower end of the core empirical data set is appropriate for Dublin Airport's beta for the following reasons:

- a shorter-term focus, removing 10yr betas from the data points, would leave the empirical evidence supporting a range of 0.46 to 0.56 from robust regression estimators;

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[35] Swiss Economics (2019) Dublin Airport Cost of Capital for 2019 Determination – final report. Available online, p. 41.

[36] 0.075 debt beta.

[37] We note that when assessed against the IAA's previous risk criteria, Bologna would not have scored highly on the "economic regulation" dimension as it operates within the Italian airport charging framework rather than a highly prescriptive standalone incentive-based regulatory model like Dublin or Heathrow.

- a cross check focusing on listed hub airports more similar in nature would suggest focus on the lower end of the range, at least lower bound to mid-point, with little evidence supporting above 0.55;
- there is a strong case for why the relatively low traffic volatility faced by Dublin Airport, and its single-till framework, reduces the risk relative to the comparator set, for which we propose an adjustment of 0.05. Applied to the top end of the empirical range of 0.61, this leaves a top end of 0.56; and
- we also find, 10yr rolling average of 2y betas supports a beta of 0.57 median across ten years, which still captures a longer term perspective.

3.4.4. Debt beta and Equity beta

We have used a debt beta assumption of 0.075 and the Harris-Pringle estimation approach to de-lever and re-lever the comparator betas, and to calculate a Dublin Airport equity beta, for both the high and low case estimates.

Therefore, our resulting equity beta for Dublin Airport is between 0.717 and 0.883, rounded to **0.72 to 0.88**.

4. TOTAL MARKET RETURN

The Total Market Return (TMR) represents the returns that could be expected on average from holding the theoretical 'market portfolio', covering all types of investment. An estimation of this value is required to build up a picture of equity risk premium and ultimately to derive the return on equity for investment in Dublin Airport.

To estimate an equity risk premium (ERP), there are two recognised approaches: the stable TMR approach or the stable ERP approach. Stable ERP approach assumes ERP is stable overtime, and variations in risk-free rate (RfR) are passed through to variations in the TMR. This implies the premium that investors require for bearing risk in that sector in excess of the RfR, is stable in the long-run.

The stable TMR approach assumes conversely that TMR is stable over time, and variations in RfR are offset by variations in ERP. Therefore, ERP is derived as difference between stable TMR and current RfR.

4.1. IAA'S HISTORICAL APPROACH

The IAA has previously estimated ERP directly, but in 2019, proposed a change to estimate ERP by TMR-RfR, the stable TMR approach. Aer Lingus has previously observed that this approach differs from that used by other regulators across continental Europe.

We understand from its 2026 Issues Paper, that the IAA is minded to use the stable TMR approach again, using both a combination of Dimson, Marsh and Staunton's historical data from 1900 to the present for Ireland; as well as forward-looking evidence from a Dividend Discount Model.

4.2. DUBLIN AIRPORT'S REGULATORY PROPOSITION

Frontier's approach focuses on a stable TMR approach, and estimation of the TMR through calculating arithmetic means of historical DMS data. Focusing on Irish and eurozone (10 countries) returns, as supported by other regulatory precedent in Ireland (namely CRU). This approach leads to a range of 6.5% to 6.8%, but we note this is informed by the 2025 DMS dataset (up to 2024 data), which has since been superseded by the 2026 publication.

4.3. CEPA ANALYSIS

We agree with IAA precedent and Frontier's approach to the extent that long-run historical evidence, of which the DMS dataset is a widely recognised source, is an appropriate approach to estimating the TMR. Consistent with our view that European capital markets are highly-integrated, we agree with placing some weight on the Irish evidence, but also on wider European evidence. The DMS dataset includes complete data for 15 European countries, 10 of which are within the Eurozone, and 5 of which are not.[38]

We agree with Frontier that while there may be some merit with looking at forward looking models, they are very sensitive to certain assumptions, and therefore do not use them here.

4.3.1. Regulatory precedent

The most recent regulatory determination to estimate the TMR is the PR6 determination in the Irish Electricity sector, that categorised the TMR as 6.4-6.8%.[39] We note that this estimate followed a similar approach as we propose here, but was based on the previous issuances of the DMS data set (the 2024 version was used to inform Draft Determinations and the 2025 version to update for Final Determinations).

[38] Austria, Belgium, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal, and Spain are in the Eurozone, Denmark, Sweden, Norway, Switzerland, and the UK we include in our Eurozone+ estimate.

[39] CEPA (2026) PR6 Financial Issues: Onshore. Available online.

4.3.2. DMS analysis

Our preferred approach to the TMR places weight on both "ex-post" and "ex-ante" approaches to infer future expected equity total returns from historical data. This subsection describes these approaches in detail, as well as our overarching approach and assumptions surrounding parameter stability.

Ex-post approaches to estimating the TMR take the view that long-run averages of historical data on equity total returns are sufficient to forecast investor expectations for the future without further adjustment. This contrasts with ex-ante approaches, which take the view that historical equity returns reflect some "unexpected" or "non-repeatable" component which investors would not expect going forward.

For our analysis, we propose to source equity returns data for Ireland and also for the eurozone using individual country Equity Total Return Indices compiled by DMS, and published in the 2026 Credit Suisse Global investment Returns Yearbook.[40]

We propose to deflate the historical DMS equity returns with a long-run DMS CPI series, and use the geometric deflation approach (applying the Fisher equation). According to financial theory, AM estimators are superior when forecasting an annual return, while GM estimators provide a picture of annual returns compounded over time.

Ex-post results

Our range of ex-post results are presented below. The Eurozone and Eurozone+ values are medians of the individual country values (including Ireland).

Table 4.1: Ex-post TMR estimates by estimator and holding period (1899-2025)

	Ex-post TMR, 1yr AM	Ex-post TMR, 10yr AM
Ireland	7.10%	6.48%
Eurozone (median)	6.73%	5.74%
Eurozone+ (median)	7.16%	6.15%
Eurozone (average)	6.71%	6.22%
Eurozone+ (average)	6.93%	6.36%

Source: CEPA Analysis of DMS data.

Ex-ante TMR

The ex-post approach above is founded on a judgement that the future will be like the outturn. Ex-ante approaches, on the other hand, take the view that historical returns reflect an "unexpected" component that was not foreseen by investors at the time and may not be expected on a forward-looking basis by current investors.

From this point of view, sole reliance on unadjusted historical returns may result in an upwardly-biased TMR estimate, due to the presence of these non-repeatable factors. The ex-ante evidence is, however, likely to be less robust overall compared to historical ex-post data, due to the additional subjectivity needed to judge not just *whether* the future will differ from the past but also *how*.

We propose to place weight on the so-called "Fama-French dividend growth model approach". This approach assumes that the repeatable portion of historical equity total returns corresponds to dividend yield and dividend growth and thereby removes the portion of outturn returns that corresponds to an unexpected capital gain.[41]

For each European country, we apply a dividend growth model approach to DMS data on equity total returns and capital gains to decompose equity returns into:

[40] Dimson, Marsh and Staunton (2025), Credit Suisse Global Investment Returns Yearbook.

[41] Fama and French (2002), The Equity Premium, available here.

- a trailing dividend yield,
- the growth rate of real dividends, and
- unexpected expansion in the P/D ratio.

We seek to remove the P/D ratio expansion component from historical returns.

Based on a dividend growth modelling approach using DMS's real equity total return and capital gain indices, it is possible to estimate the long-run dividend yield and dividend growth rates for the European companies in the sample. The ex-ante "expected" returns are the sum of the dividend yield and dividend growth components. The "expansion in the P/D ratio" term is the residual component of the ex-post returns.

Table 4.2: Ex-ante estimated TMR

	Ex-ante TMR, AM
Ireland	6.99%
Eurozone (median)	6.46%
Eurozone+ (median)	6.80%
Eurozone (average)	6.59%
Eurozone+ (average)	6.77%

Source: CEPA Analysis of DMS data.

4.4. CEPA RECOMMENDATION

We estimate a range of **6.4% to 6.9%** underpinned by the following findings:

- The central tendency of the full suite of evidence below is captured by a 6.4-6.9% overall range.
- The ex-post 1yr AM values can be categorised by a range of 6.7% to 7.1%, but both the ex-post 10yr AM estimates and the ex-ante estimates indicate a downwards adjustment to this range.
- The ex-post 10yr AM values sit around 6.1-6.5%, noting we consider the Eurozone median value to be an outlier, and the ex-ante values can be categorised more like 6.5-6.9%. We therefore reduce the ex-post 1yr range by 20bps is a balanced reflection of these other measures.

We note two of the Irish values below sit above this range, but we consider placing too much weight on this value would detract from the European approach CEPA has used so far. We also note the Irish values reported appear volatile: for example, the Irish ex-ante estimate we draw from a 2024 data cut off is around 6.77%, and higher than the 6.05% we draw from the 2023 data cut off. Therefore, we do not agree with Frontier's approach that pins the top end of the range to the Irish observations only, and view this as an overestimation of the TMR.

Table 4.3: Combined estimates of TMR for Ireland

	Ex-post TMR, 1yr AM	Ex-post TMR, 10yr AM	Ex-ante TMR, AM
Ireland	7.10%	6.48%	6.99%
Eurozone (median)	6.73%	5.74%	6.46%
Eurozone+ (median)	7.16%	6.15%	6.80%
Eurozone (average)	6.71%	6.22%	6.59%
Eurozone+ (average)	6.93%	6.36%	6.77%

Source: CEPA analysis of DMS historical returns data (2026 edition)

5. RISK-FREE RATE

5.1. IAA'S PREVIOUS APPROACH

The IAA's previous approach used nominal 10-year Irish and German government bond yields as the source for the risk-free rate, converted into real terms using long-run inflation expectations from German breakeven and ECB survey data. The IAA considered 1-, 2- and 5-year averages historically, but moved to focus on a 6-month average in 2022 to better reflect current market conditions. It also added a forward-looking adjustment based on market expectations on future yields.

5.2. DUBLIN AIRPORT'S REGULATORY PROPOSITION

Frontier estimates the risk-free rate using Irish and German 10-year nominal government bond yields, consistent with previous IAA precedent.

German bonds are used to inform the lower end of the range and Irish bonds the upper end, reflecting the view that German bonds are the lowest-risk Euro area benchmark while Irish bonds capture relevant Irish country-specific risk. Frontier uses a 6-month averaging period to reflect current market conditions and applies a forward curve adjustment based on implied 10-year Euro area government bond forward rates (+61bps to +81bps), consistent with its approach to the cost of new debt.

The resulting nominal yields are then deflated using a 1.87% inflation assumption derived from an average of German breakeven inflation and the ECB Survey of Professional Forecasters' long-term inflation forecast.

This produces a real risk-free rate range of 1.31%–1.83%.

5.3. CEPA ANALYSIS

We estimate the risk-free rate using German government index-linked bonds. We consider these to provide the most appropriate Eurozone proxy for a riskless real asset, given Germany's AAA credit rating, the depth of the German government bond market and the quality of available market data. This approach places greater weight on directly observed real risk-free rates than on nominal yields deflated by inflation assumptions.

We focus on 10-year bonds. This tenor is consistent with our view of the relevant investor horizon for a regulated infrastructure asset, while also ensuring that the estimate is based on a liquid part of the German government bond curve.

We place most weight on recent trailing averages, in the range of spot rates to 1-year averages. In our view, recent observed real yields provide the best available evidence of the risk-free rate likely to apply over the forthcoming regulatory period. Older observations receive less weight because they reflect monetary and market conditions that are no longer representative.. However, we support the regulator in using their expert judgement to determine an appropriate averaging period.

We have applied neither a convenience yield adjustment nor a forward-curve adjustment. In our view, prevailing bond yields provide the most reliable estimate of the risk-free rate at the point of determination. Forward rates do not have better predictive power than current yields and can embed term premia, liquidity effects and other market distortions. We therefore prefer to use observed yields directly, rather than adjust them using forward curves. We are particularly cautious of the magnitude of the uplift proposed by Dublin Airport.

We consider this provides a transparent, market-based estimate of the real risk-free rate, while remaining consistent with the use of long-tenor government bond evidence in previous regulatory determinations.

5.4. CEPA RECOMMENDATION

We propose a range for the risk-free rate of **0.57% to 0.72%** which is supported by the top and bottom end of the range from a number of averaging periods.

Table 5.1: 10yr German ILB rates - as of end March 2026

	Spot	1-month	3-month	6-month	12-month
German ILB rates	0.57%	0.59%	0.70%	0.72%	0.70%

Source: CEPA analysis of German 10yr government bonds from Bloomberg

5.5. Equity Risk Premium

The resulting ERP from our approach is 5.63% to 6.08%.

While we have put forward a proposed approach above for the calculation of the ERP, we would like to clarify that when equity beta is close to 1, the ERP is effectively passed through almost one-for-one into the cost of equity, and, at 50% gearing, it has about half the impact on the WACC. For example, a 10bps uplift to the ERP results in a 5bps uplift to the WACC with an equity beta of 1 and 50% gearing.

6. GEARING

6.1. IAA'S PREVIOUS APPROACH

In 2022, Swiss Economics recommended to the IAA to retain the existing 50% notional gearing assumption used in previous Dublin Airport determinations, including the 2019 determination. It concluded that there was no strong evidence to justify changing the regulatory capital structure despite stakeholder submissions during the 2022 Interim Review, and emphasising regulatory consistency and stability.

6.2. DUBLIN AIRPORT REGULATORY PROPOSITION

Frontier adopts a notional gearing assumption of 50% net debt to RAB and argues this is consistent with long-standing regulatory precedent for Dublin Airport, and is within the range of Dublin Airport's actual gearing and HAL H7 gearing decision.

6.3. CEPA RECOMMENDATION

To estimate an appropriate notional gearing assumption for Dublin Airport, a good evidence base would be to look at both the actual gearing of comparator airports used in our beta estimate, and the actual gearing of Dublin Airport.

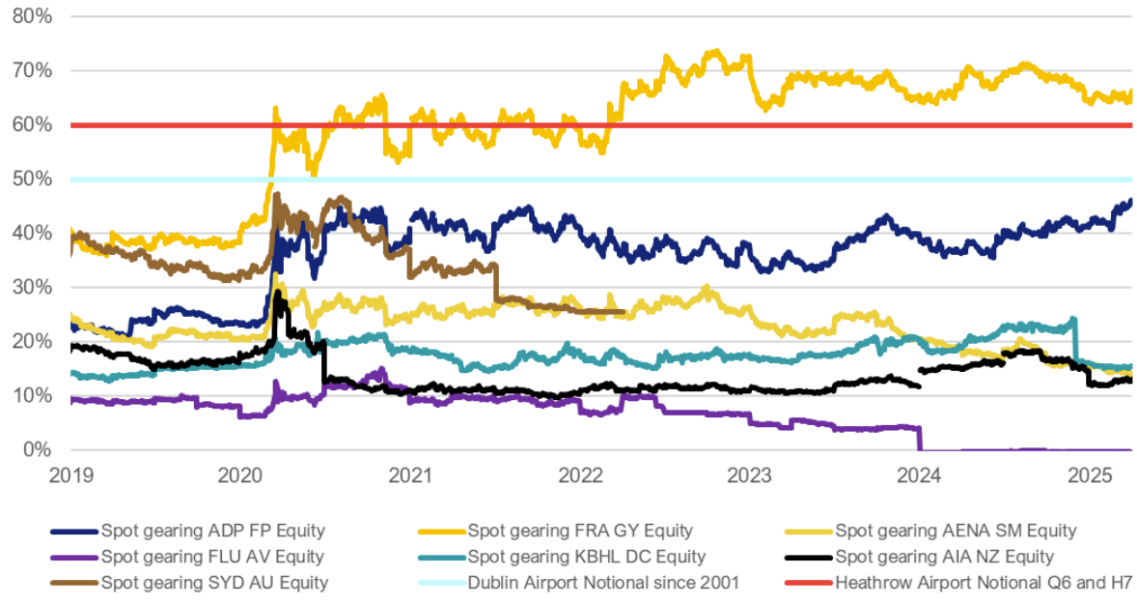
We observe a spread of actual gearing of comparator airports. Only one airport exceeds the current notional gearing assumption of 50%, and only one more has in recent years exceeded 40%. Dublin Airport reports recent actual gearing (net debt to RAB ratio) estimates of 34% to 41% (based on the Frontier submission).

Therefore, we are of the view that a notional gearing assumption of **40%** is well-supported.

While the impact on the WACC is small, an unnecessarily higher assumed level of gearing such as 50% can put pressure on credit metrics above and beyond that faced by efficiently financed peer airports, and places an assumption that the marginal investments for Dublin Airport going into the next period would be debt financed.

Should the IAA opt for a higher notional gearing assumption on grounds of consistency with previous determinations, it should not allow this to serve as the basis for unwarranted adjustments to maintain financeability.

Figure 6.1: Dublin Airport notional gearing versus comparator actual gearing



CEPA analysis of Bloomberg data, as reported in the Aer Lingus Issues Paper 2026 determination response

7. SELECTION OF A POINT ESTIMATE

7.1. IAA'S PREVIOUS APPROACH

The IAA's previous approach has been to add a 50bps to the estimated WACC, which it has referred to as an "aiming-up allowance", justified by measurement error, asymmetric welfare effects from underinvestment, and as referring to there being no implicit aiming-up elsewhere in the WACC.

7.2. DUBLIN AIRPORT'S REGULATORY PROPOSITION

Frontier argues that there is a case to aim up from the midpoint for the point estimate because the impact of the underestimating the WACC would be more material than overestimation.

The report identifies four main reasons:

- Regulatory predictability and stability: maintaining aiming-up supports confidence in the regulatory framework and helps underpin credit quality. Frontier notes that aiming-up has been applied in previous Dublin Airport determinations and is common in other regulatory sectors.
- Supporting investment and growth: the airport faces a large capital programme, with approximately €750m of annual capex and double-digit real RAB growth. Frontier argues that aiming-up helps support timely investment and reduce the risk of underinvestment.
- Measurement error in WACC estimation: Frontier considers there to be particular uncertainty around beta estimation following the pandemic and argues that aiming-up helps mitigate the risk of underestimating systematic risk.
- Competition for infrastructure capital: the report argues that airports compete globally for financing alongside sectors such as energy networks, decarbonisation infrastructure and data centres. Frontier therefore considers that the allowed return should reflect the need to maintain access to capital markets.

Frontier also argues for an inflation adjustment to ensure consistency between the inflation assumptions used to derive the real WACC; and the inflation index used to index the RAB (expanded on below).

Frontier conclude that both the inflation mismatch adjustments are justified and together with concerns over underestimating the WACC, require an uplift of 50bps to the midpoint of the WACC range, in line with previous regulatory precedent for Dublin Airport, but of which 40bps is explained by the required inflation adjustment.

7.3. CEPA ANALYSIS

The approach to selecting a point estimate used by the IAA historically has been arbitrary and we strongly request the IAA review this approach. Historically, aiming-up adjustments have been justified, in part, to mitigate the risk that a WACC set too low could deter required investment. In practice, Aer Lingus has told us that the timing of capital investment has been more driven by planning and operational activities rather than the level of the allowed return. Airport users may therefore have historically paid higher charges without any corresponding benefit.

We have seen examples of other regulators selecting a point estimate above the midpoint, but on balance we feel there are also reasons to aim down. The CAA's Initial Proposals for Heathrow Airport present an "aim straight" approach, selecting the midpoint of the range.[42]

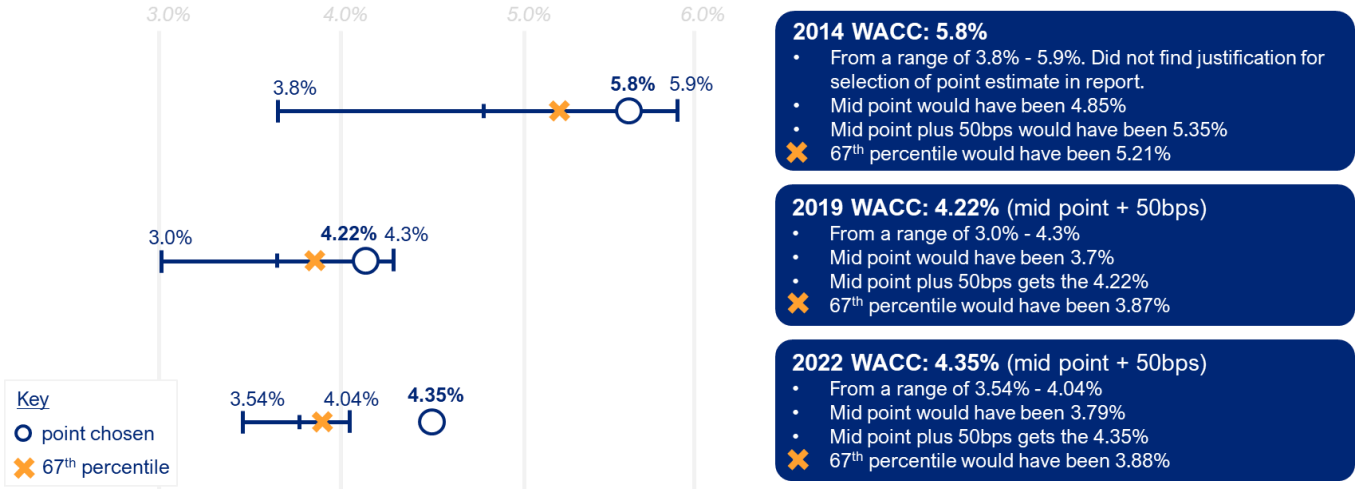
To understand whether anything other than the midpoint of a WACC range is appropriate, we propose the following as a good framework:

[42] CAA (2026) Economic regulation of Heathrow Airport: H8 Initial Proposals - Section 3: financial issues and calculating the price cap. Available online, p.88

- **Is there a reason to aim away from the estimate underpinned by the evidence?**
    - Measurement error in itself should not automatically justify an uplift. The IAA invests significant time and resources into analysing the appropriate WACC, including reviewing submissions from stakeholders. This process does require judgement. In the absence of clear evidence to the contrary, it is reasonable to assume that judgement has been applied in a balanced way such that any estimation or forecast errors are unlikely to have a systematic directional bias.
    - Periodic resets further support this view. Regular review cycles provide recalibration opportunities such that if the WACC were incorrectly set, the period impacted is time bound. Again it is reasonable to assume that any sources of systematic bias will be corrected over time.
- **Should a regulator feel that a measurement error is likely in a certain parameter, that is best reviewed (and ideally addressed) at source.**
    - Historically, the IAA has included a "50bps aim up on overall WACC". In practice, marginal cash flows accrue to equity, and so (at 50% notional gearing) this is better thought of as a 100 bps uplift to the return on equity. This number is large relative to plausible sources of uncertainty in the estimated cost of equity.
    - Debt measurement error risk is limited. The approach taken by the IAA is for embedded debt allowance to be largely based on actual debt costs (e.g., 73% in 2022), which means the risk of measurement error on the debt-side is reduced. Historically, on new debt, the IAA has allowed a cost of new debt allowance reflective of a higher risk entity (BBB+) compared to what Dublin Airport actually maintained even through unprecedented shock (A- to A). This is more likely to have overstated the required returns than understated. In our estimate we propose to address this by placing slightly weight on A rated benchmarks than BBB rated.
    - For the next regulatory period, Dublin Airport has requested a substantial capex programme, which implies significant new debt-raising requirements. This is reflected in a relatively high weighting on (more expensive) new debt. However, Aer Lingus has told us that capex delivery can often be delayed relative to expectations, for example due to operational constraints. An allowance based on Dublin Airport's forecast share of (more expensive) new debt is therefore more likely to overstate the required return than understate it. We have not made a specific adjustment for this in our estimate. When final information is available on future capex plans, this is a factor that the IAA should take into account when selecting its own point estimate.
- **Should a regulator feel there is a case for selecting a point estimate away from the midpoint, the size of the deviation must be appropriately calibrated.**
    - An uplift of 50bps to the whole WACC, as applied historically, is arbitrary. A defensible adjustment would have regard to both the direction and scale of potential measurement error and the plausible limits of the overall WACC range.
    - Other regimes commonly use a percentile-based approach to ensure the chosen point estimate remains consistent with the underlying data. The 67th percentile is a common choice – though we do not advocate for this choice without consideration of the reasons for selecting a point estimate above or below the midpoint. Across the last three determinations, adding 50bps to the WACC has resulted in a point estimate above the 67th percentile, and in some instances, outside of the WACC range entirely. A comparison is shown in Figure 7.1.
- **Should a regulator feel there is a case for aiming up, it should consider the incentive created by doing so.**
    - Under an incentive-based regulatory framework, returns above or below the cost of capital are ideally linked to the regulated company's performance. Aiming up on the WACC, by contrast, primarily rewards sunk historic investment, not just new investment. Should the IAA conclude that

aiming up is unavoidable, we encourage it to consider how that aiming up could be made conditional on (achievable) delivery of beneficial outcomes for airport users targeting delivery risk.

Figure 7.1: Comparison of a 50bps uplift to a 67th percentile on historical IAA decisions



Source: CEPA analysis of previous IAA regulatory determinations for Dublin Airport

8. INFLATION

Investors require compensation to account for changes in the underlying purchasing power of their investment over time. Under a RAB-based price control framework, investors in a notional entity would receive their total nominal allowed return through a real cash return combined with inflation indexation of the RAB. We understand that Dublin Airport's RAB is indexed using the Irish Consumer Price Index (CPI) published by the Central Statistics Office (CSO).

Some WACC parameters can be estimated directly in real terms, while others must first be calculated in nominal terms and then deflated using an inflation index. Where we deduct expected inflation using a different data source to what the RAB will be uplifted by, there is a scope for a mismatch. This mismatch, if it occurs, can be mitigated with an inflation adjustment applied to the WACC.

8.1. IAA'S HISTORICAL APPROACH

IAA's advisors, Swiss Economics, previously used 2.67% long-run inflation assumption to convert nominal yields into real WACC values. The estimate was based on an average of inflation expectations implied by the differences between German inflation-linked government bonds and nominal bonds (breakeven inflation); and the ECB Survey of Professional Forecasters (10-year ahead inflation expectations).

8.2. DUBLIN AIRPORT REGULATORY PROPOSITION

Frontier follow the same approach suggested by the IAA previously and use a long term inflation assumption of 1.87% to deflate all parameters in its WACC estimation. 1.87% is an average of 6-months average 10yr breakeven inflation (to end of September 2025) of 1.75%, as well as ECB survey data long-term assumption of 2.00%.

To estimate whether there is a mismatch between the inflation assumption used in its estimation of the WACC and the Irish CPI measure applied to Dublin Airport's RAB, Frontier looks to see if there is a difference between historical Euro area HICP and Irish CPI.

The approach takes an annual average inflation rate for Euro HICP and an annual average inflation rate for Irish CPI from CSO for each year between 2014 and 2025.

Frontier observe the following:

- The average annual difference between the two inflation rates is 0.4 percentage points between 2014 and 2025
- Looking back over the past 20-years there is more volatility through the Global Financial Crisis (GFC), but the average figure remains the same 0.4 percentage points.

From this, Frontier conclude there is a risk of mismatch between inflation figures used in its WACC estimate and that applied to the RAB by an average of 40bps, and therefore an inflation adjustment added to the WACC of 40bps is warranted.

8.3. CEPA ANALYSIS

Where required, in calculation of a real WACC, we have deflated values using historical 10yr German Break-even Inflation for the corresponding day of the nominal values used, i.e. a daily approach, as opposed to a long-run assumption.

8.3.1. CEPA critique of Dublin Airport approach adjustment

What the Frontier chart shows, but is not discussed, is that the recent data from 2023 to 2025 is more volatile and not always conclusive on direction of any difference between German and Irish inflation.

Additionally, we are unsure whether the 1.87% inflation assumption used by Frontier, an average of German breakeven inflation and ECB forecasts, could be directly considered as a Euro HICP measure. Therefore, in our approach we review a number of inflation series to identify whether there is a gap between German and Irish inflation measures.

8.3.2. Recent forecasts

Focusing on forecast sources for 2027 (noting longer term forecasts are not available for all of the below sources), we find mixed evidence for a differential between inflation forecasts for Germany and Ireland. Firstly, the most recent forecast available (IMF) places Irish CPI at a higher rate than German CPI.

Secondly, the respective central bank forecasts, as of December 2025, suggested German HICP would be higher than Irish by 30bps, however, the Central Bank of Ireland has since published a significantly higher forecast, placing Irish HICP at a much higher rate. We have opted to show forecasts from similar publication dates where possible. Forecasts are also wide-ranging, with more than a percentage point of recent forecast uncertainty reflected in the Irish estimates.

Table 8.1: Inflation forecasts for Germany and Ireland for 2027

Forecast for 2027	Germany		Ireland		Differential
	Rate	*Published*	*Rate*	*Published*	
IMF (CPI) [43]	2.3%	April 2026	2.4%	April 2026	-0.1%
Bundesbank and CBI (HICP)	2.1%[44]	December 2025	1.8%[45]	December 2025	0.3%
			2.6%[46]	March 2026	
ECB (HICP)	1.9% [47]	November 2025	1.7%[48]	November 2025	0.2%
Bloomberg (CPI) [49]	2.3%		1.8%		0.5%
Average differential					**0.23%**

Source: CEPA analysis of forecast data

8.3.3. Historical outturn

Comparison of German HICP[50] and Irish CPI[51]

Primarily we focus on a comparison of German HICP versus the rate to which the RAB is uplifted (Irish CPI), as German Breakeven inflation is more aligned with a HICP measure of inflation than CPI.

Our analysis of historical evidence of German HICP inflation and Irish CPI inflation over the 2016-2026 period gives an interquartile range of 0.1% to 1.20%, using daily data on outturn annual inflation rates, with a median of 0.60%.

[43] IMF (2026) World Economic Outlook database - Inflation rate, average consumer prices (CPI). Available online.

[44] Deutsche Bundesbank (2025) Bundesbank's Forecast for Germany. Available online.

[45] HICP forecast from Central Bank of Ireland (2025) Quarterly Bulletin No.4 2025. Available online.

[46] HICP forecast from Central Bank of Ireland (2026) Quarterly Bulletin No.1 2026. Available online.

[47] ECB (2025) Survey of Professional Forecasters – Economic forecast for Germany (17 November 2025). Available online.

[48] ECB (2025) Survey of Professional Forecasters – Economic forecast for Ireland (17 November 2025). Available online.

[49] Accessed 04 April 2026.

[50] ECB's HICP measure "Overall index" for Ireland and then for Germany, Monthly. This data measure is not available beyond December 2025 due to methodological changes in calculation approach. Available here and here.

[51] As reported on Bloomberg

However, we note that when we reduce the averaging period, the evidence becomes less and less conclusive. Focusing on a one year averaging period for example (1st April 2025 to 31st March 2026), the size of the differential is much smaller and less conclusive on direction, with an inter-quartile range (IQR) of -0.60 to +0.10%, and a median of -0.3%, implying that Irish CPI has been on average 0.3% higher than German HICP over the last 12 months. Figure B.1 in Appendix B displays a time series over the last 10 years, of these indices.

German Breakeven Inflation versus Irish CPI[52]

When comparing the 10yr German Breakeven series to Irish CPI, over ten years of data (1st April 2016 to 31st March 2026) we observe the differentials have an IQR of -1.43% to 0.88%, with a median of 0.02%. Over the past year, the differential reduces significantly, with an IQR now of -0.96% to -0.08% (Ireland inflation is larger than Germany).

Comparison of wider German and Irish measures

To complement this analysis, we have also looked at comparing broader inflation indices between Ireland and Germany, but do not find that the evidence is conclusive on the direction of any difference.

Comparison of German HICP and Irish HICP

Our analysis of historical evidence on the German-Irish inflation differential over the 2016-2026 period gives an interquartile range of 0.30% to 1.30%, using daily data on outturn annual inflation rates.

Again, we note that when we reduce the time period to one year, the size of the differential is much smaller and less conclusive on direction, with an IQR of -0.50 to +0.20%, and a median of -0.30% differential (Ireland has 0.30% higher inflation than Germany).

Comparison of German CPI and Irish CPI

A comparison of monthly outturn data on annual inflation rates German v Irish CPI in the last ten years provides an IQR -0.2% to 1.1%, which is not conclusive on direction. The direction becomes even less clear when focusing on more recent data (one year to 31st March 2026), with an IQR ranging between -0.8% and 0.2%, again where a median value of -0.30% suggests Ireland has 0.30% higher inflation than Germany.

Table 8.2: Inflation outturn data for Germany and Ireland for up to end March 2026

Source	Germany minus Ireland - LQ	Germany minus Ireland - UQ	Overall implication
Breakeven/HICP versus CPI			
German HICP versus Irish CPI – 10yrs	0.10%	1.20%	German > Irish
German HICP versus Irish CPI – 1yrs	-0.60%	0.10%	Inconclusive
German Breakeven Inflation versus Irish CPI – 10yrs	-1.43%	0.88%	Inconclusive
German Breakeven Inflation versus Irish CPI – 1yrs	-0.96%	-0.08%	Irish > German
Comparison of same measures for Ireland and Germany			
Historical HICP - 10yrs	0.38%	1.30%	German > Irish
Historical HICP - 1yrs	-0.40%	0.45%	Inconclusive
Historical CPI - 10yrs	-0.20%	1.10%	German > Irish

[52] The available data on Irish Breakeven inflation is limited due to a relatively small number of Irish index-linked bonds and a relatively shallow market. At the end of 2025, we reviewed data on breakeven inflation at a 25yr maturity through use of an Irish government 2051 inflation-linked bond, an Ireland 25yr nominal bond index and a German 25yr breakeven inflation index, over the period of 2025. We find implied 25yr Irish inflation of 1.60% and German inflation over the same horizon of 1.94%. This implied an inflation differential of 0.34%.

Source	Germany minus Ireland - LQ	Germany minus Ireland - UQ	Overall implication
Historical CPI - 1yrs	-0.80%	0.20%	Irish > German

Source: CEPA analysis of historical data

8.3.4. Summary of inflation differentials

When reviewing a broad range of inflation measures at this point in time, we do not find conclusive evidence of a forward-looking differential between German HICP and Irish CPI inflation measures. Although small differences are inevitable from year to year, we need not expect those differences to be systematically positive or negative.

While forecasts suggest on average a differential of 0.23%, the most recent available forecasts actually show a differential in the opposite direction, -0.1% also being a plausible number. There is even some evidence in the short-term that the Irish HICP may exceed the latest German benchmark by 0.5%, though this comparison is hampered by the absence of recent German forecasts of the same vintage as the most recent Irish forecasts.

We do place some weight on the view that when looking at longer time ranges, such as ten years, the data suggests that Germany's annual rate of inflation has tended to be above Ireland's. This is consistent with recent regulatory determinations adopting a positive adjustment in the WACC – most recently a 40 bps point was chosen from a range of 10-40bps in the CRU's PR6 determination. Therefore, it remains plausible that an adjustment of up to 40 bps could be defensible.

However, the relevant evidence has become less clear in recent times and a clear direction does not prevail across different forecasters, therefore it is also true that no adjustment would also be defensible. We support the historical averages presented in the table above with annotated time series charts in Appendix B.

8.4. CEPA RECOMMENDATION

CEPA has in part used slightly different inflation sources in different areas of the WACC, including a CPI forecast, and therefore propose any uplift added on the overall WACC is reduced in size to reflect this. For the cost of debt, we have used a German breakeven inflation series in our estimation of the cost of new debt, but a CPI estimate for forward-looking rates on embedded debt, therefore we do not propose an adjustment is required for the cost of embedded debt. For the cost of equity, our risk-free estimate is reflective of German breakeven inflation, but to derive the TMR, we have used the DMS inflation series, which may require an adjustment.

In order to come up with a suggested adjustment, we take into account recent regulatory precedent where a 40bps point was chosen from a range of 10-40bps, forecast data which ranges from -10bps to +50bps, historical long term trends where there is a case for a differential. Drawing more attention to the latest evidence and shorter term forecasts, however, it is also plausible that no adjustment is required, particularly as the RAB is indexed to CPI rather than HICP inflation and some parts of our WACC are estimated directly in Irish CPI real terms. On balance, we propose a small adjustment of **10 bps** to the WACC.

9. TAX

At present Dublin Airport's Regulatory Proposition has not clearly justified the tax rate applied in the WACC. CEPA are not tax experts and are not qualified to advise on the effective tax rate of Dublin Airport, however we make the following observations.

We understand there to be more than one corporation tax rate that could apply. We understand there to be two rates of corporation tax for companies in Ireland: 12.5% for normal trading income; and 25% for non-trading income.[53] We also understand Multi-National Enterprises (MNEs) and large-scale domestic groups with a global annual turnover of €750 million and above in at least two of the preceding four years are required to pay a minimum of 15% tax.[54]

Frontier have used an assessment of Dublin Airport's effective tax rate from the past two years which results in a 16.1% average rate, but have not specified which business areas attract a higher tax rate, and whether these fall within or outside the regulated activities.

We would request the IAA investigates this effective tax rate assumption, and requests Dublin Airport provide an explanation as to which revenue streams are taxed at a higher rate. We request the IAA ensure that its estimate for the tax rate is reflective only of activities relating to Dublin Airport itself and not the wider daa plc group, other entities in the group, or daa finance. Additionally, a tax assumption used in the WACC should reflect a forward-looking assessment of the tax to be paid, and not just focus on historical payments of two years.

CEPA has therefore used a tax assumption range of 12.5% to 16.1% in estimating our WACC.

[53] Revenue – Irish Tax and Customs (2026). Corporation Tax. Available online.

[54] Revenue – Irish Tax and Customs (2026). Global Minimum Level of Taxation for Multinational Enterprise Groups and Large-Scale Domestic Groups in the Union. Available online. p6

Appendix A. ROBUST REGRESSION APPROACHES

Equity returns are empirically heavy-tailed[55] and can contain influential observations, meaning the estimated beta may be materially distorted by a small number of extreme stock-market return pairs.[56] This may motivate alternative designs aimed at mitigating the impact of outliers while preserving information in the bulk of the sample.

Under the view that COVID-impacted outliers are unrepresentative of forward-looking risk pricing, we present several objective and symmetrical approaches to controlling for their impact in the 10-year beta:

- **Influence-based deletion:** We delete observations based on their influence in the OLS regression using Cook's distance. We follow a common rule of thumb of deleting all observations with a Cook's distance greater than 4/n.[57]
- **Residual-based deletion:** We remove observations with large, standardised residuals (i.e., greater than 3SDs). If residuals are normally distributed this would account for roughly 0.1% of the data.
- **Winsorisation:** We winsorise extreme stock market and company returns at the 1st and 99th percentile.[58]
- **Least Absolute Deviation (LAD):** We estimate beta using the LAD estimator. This involves replacing the objective function of the OLS estimator so that instead of minimising the sum of squares, beta minimises the sum of absolute deviations.
- **Robust regression:** We estimate the Huber-robust regression model. This involves placing different weight on normal observations and outliers. It can be thought of as a model in between OLS and LAD.[59]

We apply each of the five outlier-mitigation techniques described above to the 1-year, 2-year, 5-year and 10-year spot asset betas, for an end-March cutoff date for the four main comparators.

This analysis indicates that:

- The 10-year asset beta features significant upward bias, correcting for which reduces the asset beta by 0.06-0.07 or more.
- There is on balance downward bias in spot 1-year and 2-year betas, but not enough to "balance out" the upward bias featured in the 10-year beta.

We would not suggest that the IAA explicitly place weight on any single one of these approaches, and recognise the challenge of robustly and transparently controlling for outliers in beta regressions.

At the same time, this analysis indicates that five separate approaches point to similar degrees of material upward bias in the 10-year spot asset beta.

We measure a standard error for the 10-year equity beta of 0.06, and note that the average reduction in the equity beta implied by the five approaches considered above is -0.10, indicating that the degree of bias is large relative to a standard error.

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[55] Heavy-tailed is a technical term meaning the underlying distribution of returns contains more mass than an exponential distribution.

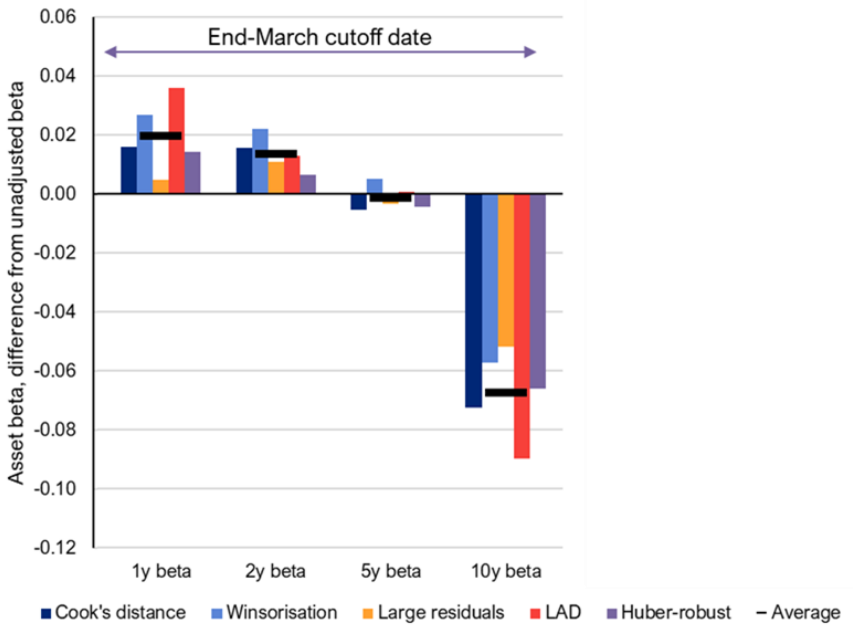
[56] Chan, Louis K. C., and Lakonishok, Josef (1992). *Robust Measurement of Beta Risk*. Journal of Financial and Qualitative Analysis.

[57] This was the rule adopted by Ofwat in PR24.

[58] Winsorising is the process of putting a cap and ceiling on the observations.

[59] Huber, Peter J. (1964). *Robust Estimation of a Local Parameter*. Annals of Statistics.

Figure A.1: Outlier-corrected comparator-average asset betas at different horizons, difference to unadjusted beta.



Source: CEPA analysis of Bloomberg data. Figures presented are cross-sectional averages.

Appendix B. HISTORICAL INFLATION DIFFERENTIALS

Figure B.1: Comparison of German HICP to Irish CPI over 10yrs

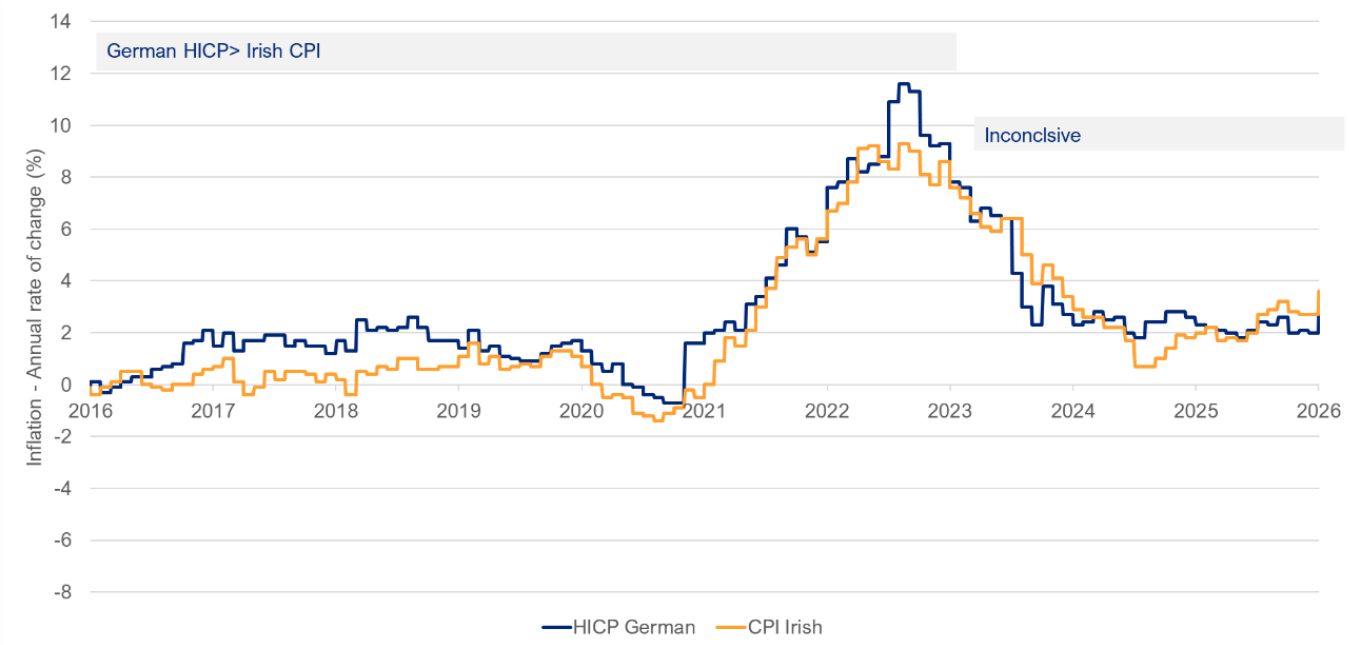


Figure B.2: Comparison of German HICP to Irish HICP over 10yrs

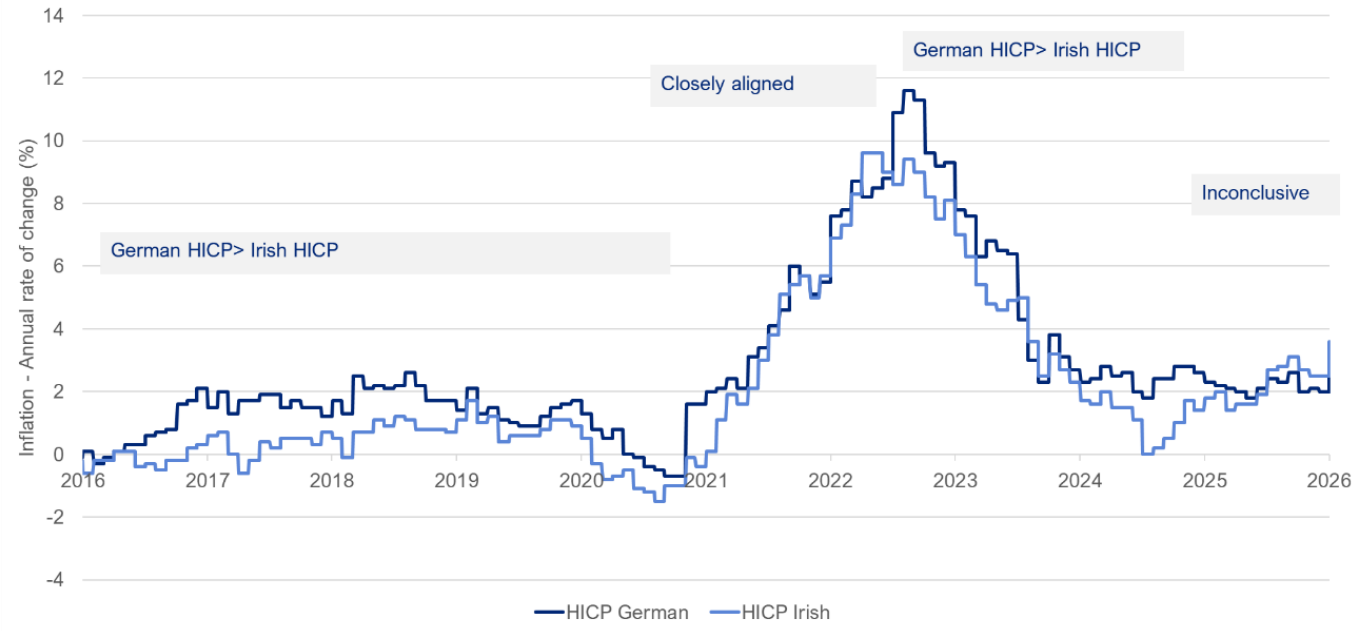
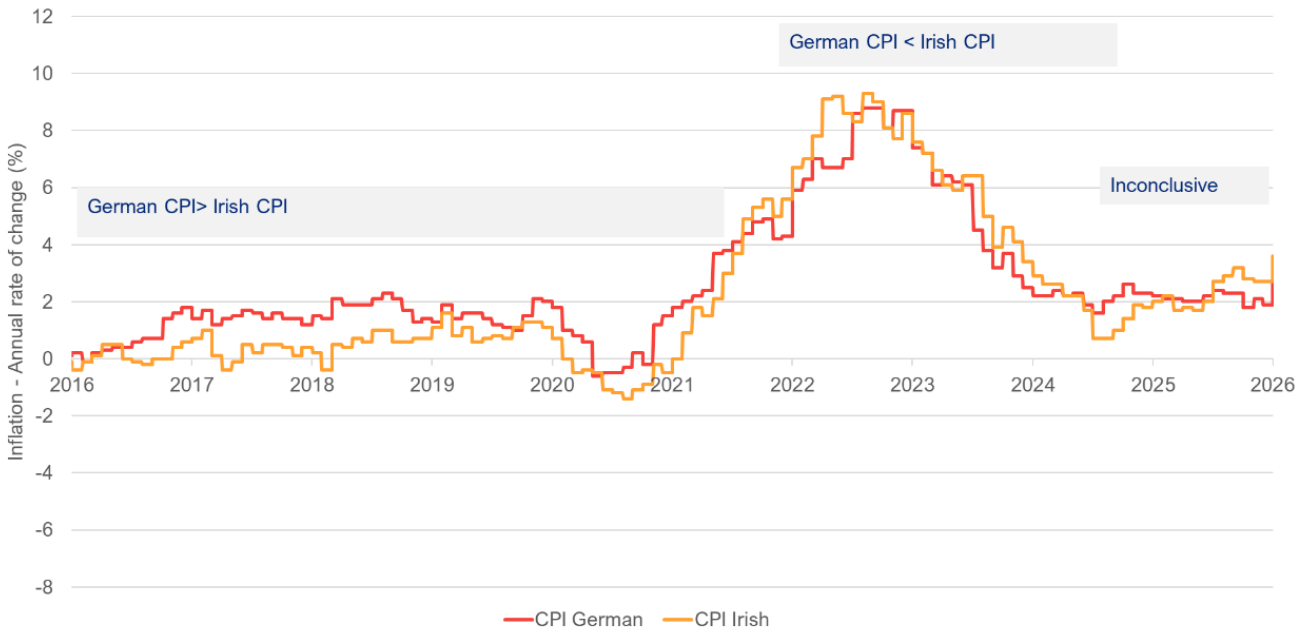


Figure B.3: Comparison of German CPI to Irish CPI over 10yrs



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