Summary report

on reviews of compliance with the performance and charging scheme

assessing the differences between determined and actual costs of 2021

in selected Member States

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Executive Summary

This report summarises the findings and implications for airspace users stemming from reviews of compliance conducted by the European Commission services (DG MOVE), in cooperation with national supervisory authorities (NSAs) and air navigation service providers (ANSPs), and with the support of EY Aviation Policy and Financial Accounting experts.

Substantial differences in 2021 air navigation costs were initially identified by the Performance Review Body (PRB) in its 2021 Annual Monitoring Report. The reviews of compliance aimed to verify the cost differences and to uncover the reasons behind those cost discrepancies. The reviews were conducted in the Member States with the largest percentage differences in costs.

The reviews confirmed significant underspend in 2021 staff and other operating costs, ranging from -2% to -30% across various categories. The total underspend amounted to circa - €121.6 million, comprising -€90 million in staff costs (excluding pension costs) and -€31.6 million in other operating costs.

The reviews identified four main reasons for the differences between 2021 actual and determined staff costs, in particular accounting provisions that did not materialise, inaccurate forecasts, capitalised staff costs, and modifications in pension costs or compensation schemes.

The reviews also highlighted three key factors explaining the differences between the 2021 actual and determined other operating costs, namely reduced costs for specific services, prolonged Covid-19 restrictions, as well as decreased other operating costs related to staff, financing, and assets.

The reviews of compliance also showed notable gaps in the documentation and evidence related to the economic oversight performed by NSAs of the costs of ANSPs. The reviews suggest a need for improved coordination and well-documented interactions between NSAs and ANSPs.

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1. Introduction

The objective of this report is to provide a summary of the key findings and impact on airspace users arising from nine reviews of compliance conducted between 2023 and 2024. The European Commission services (DG MOVE) conducted the reviews of compliance in cooperation with the national supervisory authorities (NSAs) and air navigation service providers (ANSPs), and with the support of Aviation Policy experts from EY based in Brussels, and EY Financial Accounting experts based in each of the Member States of the Single European Sky (SES) that were subject to a compliance review.

The reviews of compliance were specifically aimed at understanding the reasons behind the differences between determined and actual costs of air navigation services in 2021, verifying the accuracy of cost calculations, and identifying any potential implications of the findings for the setting of future unit rates, the implementation of any corrective measures to be imposed by the NSAs, the monitoring of the local targets in the final reference period 3 (RP3, 2020-2024) performance plan, and the local target setting for RP4 (2025-2029).

While the primary focus of the reviews was on assessing the differences between determined and actual costs of air navigation for 2021, EY also tested, for a selected sample of the air navigation cost bases, the cost eligibility principles and cost allocation methodology contained in the RP3 performance plans. In addition, EY gathered information on the related economic oversight activities carried out by the NSAs of the nine Member States under review.

This report is intended to provide lessons learnt to Member States, with the aim of improving transparency and strengthening adherence to regulatory standards. The report begins with a contextual background, followed by an outline of the review process. The report then provides the main findings and implications for airspace users, as well as conclusions and recommendations.

2. Contextual background

Determined costs refer to the annual forecast expenses usually planned before the start of a reference period. Actual costs are the expenses incurred each year and are established after the year has elapsed. Discrepancies between determined and actual costs may arise from unforeseen economic conditions, inaccurate forecasting, or changes in operational demands.

The determined cost bases should represent costs that will likely be incurred in the year indicated in the performance plan, and not assumptions of potential costs which are likely not to materialise in the respective year. Charging airspace users for determined costs in one particular year, which are not planned to be implemented in that year, is not in line with Article 15(2)(a) of Regulation (EC) 550/2004 which states that "*determined costs shall be the costs determined by the Member State at national level […]at the beginning of the reference period for each calendar year of the reference period*".

The annual monitoring report 2021 published by the Performance Review Body (PRB) identified substantial differences between the determined and actual costs in some Member States. This was particularly notable given that the NSAs set the determined costs of 2021 in October of the same year, when a significant portion of that year's costs had already been incurred. This likely indicates deficiencies in planning and/or the need for more rigorous monitoring of the setting of determined cost. While national procedures for approving performance plans can be time consuming, they should not lead to large discrepancies in actual and determined cost.

In response to the findings made by the PRB the European Commission carried out compliance reviews on nine of these Member States. The nine Member States subject to review were chosen based on the extent of their cost discrepancies in 2021, with those nine exhibiting the largest percentage differences after accounting for the future unit rate adjustments stemming from 2021.

At the same time, it must be noted that some of these Member States failed to meet their capacity targets. Out of the nine Member States reviewed, two did not achieve the capacity targets in 2021, and six in 2022.

The detailed assessments provided by the compliance reviews support compliance with the SES performance and charging scheme regulations. The reviews involve a detailed examination of data provided by NSAs to verify the accuracy, validity, and reasons behind the reported issues, as explained in the next section.

3. Overview of process and methodology

The reviews of compliance of 2021 cost differences followed multiple steps. The figure below provides an overview of the general procedure implemented for each review of compliance. Initially, a kick-off meeting was held with the representatives of each NSA, ANSP, European Commission (DG MOVE), and EY experts to define the objectives, methodology, and timeline of the review. Following the kick-off meeting, a detailed data request was issued to each NSA mainly requesting:

- the ANSP's general ledgers and accounting data,
- the NSA assessment of cost eligibility and cost allocation to en route and terminal services to ensure regulatory compliance, and
- the NSA analysis of the differences between the determined and actual costs in 2021 and the underlying reasons.

On-site visits at the NSA and ANSP premises were performed to discuss and clarify the main issues under review as well as additional issues identified from the responses of the first data request. If further clarification was needed, additional information was requested. The final reports present a thorough analysis and verification of the data provided by the NSAs and ANSPs, leading to factual findings on the identified issues.

Figure 1: Overview of the procedure of the reviews of compliance. Source: EY.

4.1. Differences between actual and determined costs in 2021

This section summarises common findings from the analysis of differences between determined and actual costs in 2021 in the nine Member States. It also presents the identified impact of the findings on airspace users.

Table 1 below summarises the differences for staff costs (excluding pension costs) and other operating costs in both the en route and terminal charging zones for 2021. The underspend in staff costs as a share of the determined staff costs ranged widely from 2% to 25%, while the same underspend as a share of the total determined costs ranged from 1% to 16%. These ranges show that, for certain Member States, the underspend achieved a significant level of variance.

The underspend in other operating costs as a share of the determined other operating costs ranged from 6% to 30%. The same underspend as a share of the total determined costs ranged from 1% to 5%, due to the lower proportion of other operating costs within total costs.

Share of underspend in determined costs	**Lowest**		**Highest**	
	Specific category	Total costs	**Specific category**	Total costs
Staff	**2%**	1%	**25%**	16%
Other operating	**6%**	1%	**30%**	5%

Table 1: Share of 2021 differences in staff and other operating costs for the en route and terminal charging zones. Source: EY elaboration of ANSPs data.

The relatively high percentages of underspend in both staff and other operating costs in 2021 highlight the need to improve accuracy and forecasting practices. Importantly, the actual costs for a considerable part of 2021 were available to ANSPs at the time of the preparation of the revised RP3 performance plans which established the 2021 determined costs.

THE OVERALL IMPACT ON AIRSPACE USERS

The total underspend in 2021 amounted to circa - €121.5 million. For staff costs, the underspend was - €90 million, and for other operating costs - €31.6 million.

Cost category	**2021 underspend: actual minus determined costs (M EUR)**
Staff	-90.0
Other operating	-31.6
TOTAL	**-121.6**

Table 2: Summary of underspent total staff and other operating costs. Source: EY analysis based on NSA data.

It must be noted that not all differences would justify a reimbursement to airspace users. However, detailed analyses in the compliance review reports reveal where these differences are not justified. Some NSAs have already taken action so that amounts are reimbursed to airspace users.

4.1.1. Staff costs

The reviews of compliance found four main reasons behind the differences between 2021 actual and determined staff costs across the nine Member States analysed. The reasons are accounting provisions that did not materialise, inaccurate forecasts, capitalised staff costs, and modifications in pension costs or compensation schemes. The three reasons are described below.

- **Accounting provisions that did not materialise:** provisions of different types were included in the 2021 determined costs in the RP3 performance plans which were paid by airspace users.

  The provisions related, for instance, to future salary benefits as well as to potential costs of court cases related to disputes which arose from measures taken as a result of the impact of the Covid-19 pandemic. In some cases ANSPs did not incur the costs for the provisioned amounts in 2021 but in years after, or in some cases will not incur those costs. As a result of including these accounting provisions in the determined costs, airspace users were charged significant costs that were not incurred by the ANSPs.

  Similarly, in 2021, some ANSPs faced negotiations with their Air Traffic Controller (ATCO) unions regarding the continuation of cost containment measures, such as the short-term salary cuts started in 2020. The pressure exerted by ATCO unions resulted in the inclusion of potential collective agreement risks in the 2021 determined costs. Despite including these risks in the determined costs, the ANSPs did not ultimately meet the ATCO union's demands and the costs of these risks did not materialise. As a result, airspace users were charged a significant cost that was not paid by the ANSPs.

- **Inaccurate forecasts:** ANSPs in several Member States spent less than planned on various staff cost categories due to inaccurate recruitment forecast and implementation. Despite indications of lower recruitment and changes in compensation schemes transpiring during 2021, the 2021 determined costs did not reflect these anticipated reductions.

- **Capitalised staff costs:** a a Member State capitalised a portion of actual staff costs in 2021, which means that these actual costs were recorded as costs related to fixed assets rather than staff costs. The result was a higher difference between the actual staff costs, which were reduced by the amount of the capitalised costs, and the determined staff costs for 2021.

  The capitalisation of these staff costs increased the fixed assets of the ANSP, leading to higher actual depreciation costs in 2021 and subsequent years. It also impacted the cost of capital, as these costs became part of the asset base of the ANSP. Consequently, while staff costs had appeared lower initially, a related effect included higher investment costs (depreciation and cost of capital).

- **Modifications in pension costs and social expenses**: In some Member States, changes in the actual pension and compensation schemes for certain employee categories compared to plan, particularly for ATCOs, led to a different pension-to-staff cost ratio. Additionally, the lower actual wages identified above resulted in actual social expenses below the determined costs. Social expenses, which aim to enhance working and social conditions and to care for employees' health, are calculated as a percentage of the salary.

THE IMPACT ON AIRSPACE USERS OF THE DIFFERENCES IN STAFF COSTS

The discrepancies between actual and determined staff costs in 2021 had financial implications for airspace users. Several ANSPs included costs for collective agreement risks, which did not materialise, resulting in airspace users paying for non-incurred expenses. Capitalising staff costs led to a mismatch where actual staff costs were lower than determined, while increasing the actual investment costs.

Additionally, inaccurate forecasting and lower than planned spending, such as reduced staffing levels, meant airspace users funded staffing initiatives that did not materialise. This misalignment placed an undue financial burden on airspace users, highlighting the need for improved NSA oversight, transparency, and accuracy in cost determination.

Table 3 summarises the main differences between the actual and determined staff costs of 2021, expressed in millions of euros, from the nine compliance reviews conducted.

Staff cost category	2021 underspend: actual minus determined staff costs (M EUR)
Accounting provisions that did not materialise	-27.8
Inaccurate forecast	-48.8
Capitalised staff costs	-0.5
Modifications in pension and social expenses	-12.9
TOTAL	**-90 .0**

Table 3: Summary of underspent staff costs by category. Source: EY analysis based on NSA data.

4.1.2. Other operating costs

The reviews of compliance also found three main reasons behind the differences between 2021 actual and determined other operating costs across the nine Member States analysed. The reasons are lower costs of certain services, prolonged Covid-19 restrictions, as well as lower costs related to staff, financing and assets. The reasons are described below. All these costs have in common that their lower level must have been known at the time of the submission of the performance plan for 2021.

- **Technical, logistical and other services:** Some Member States incurred noticeably lower actual than determined costs of repairs, maintenance, materials, transport, and other services. Postponements in capital expenditure also led to lower costs for example, for telecommunications, maintenance, and related services.

- **Prolonged Covid-19 restrictions:** There were instances where prolonged Covid-19 restrictions led to reduced trainings, business trips, events, energy consumption, and materials usage. Additionally, internal staff performed repair services instead of contractors, resulting in lower actual other operating costs.
- **Operating costs related to staff, financing, and assets:** In some Member States, savings in staff costs (e.g. due to postponement of ATCO training and recruitment of new ATCOs) led to lower actual costs of travel, maintenance, licences, and training. Lower costs were also observed in relation to financing (e.g., bad debt, foreign exchange differences), as well as lower costs for fixed asset decommissioning and replacement.

THE IMPACT ON AIRSPACE USERS OF THE DIFFERENCES IN OTHER OPERATING COSTS

The discrepancies between actual and determined other operating costs in 2021 had financial implications for the airspace users. In many instances, airspace users paid for costs that were forecasted but ultimately did not occur, such as costs for repairs, maintenance, materials, transport, and services that were lower than anticipated, as well as deferred ATCO training programs and recruitment and at the time of the submission of the performance plan for 2021 this was already known or could have been better foreseen.

Inaccurate forecasting and the subsequent lower actual expenditures meant airspace users funded services and initiatives that did not materialise. While some variations were due to normal planning deviations or timing issues that lowered the final impact, the overall effect were unjustified charges for airspace users. This situation underscores the need for improved oversight, transparency, and accuracy in cost determination.

Table 4 summarises the main differences between the actual and determined other operating costs of 2021, expressed in millions of euros, from the nine compliance reviews conducted.

Other operating cost category	2021 underspend: actual minus determined other operating costs (M EUR)
Technical, logistical, and other services	-21.7
Prolonged Covid-19 restrictions	-8.7
Costs related to staff, financing, and assets	-1.2
TOTAL	-31.6

Table 4: Underspent in other operating costs by category. Source: EY based on NSA data.

4.2. Further key considerations examined in the reviews of compliance

The main focus of the compliance reviews was the analysis of the differences between actual and determined costs in 2021 explained in the section above. Nevertheless, for a limited sample of costs, the reviews also examined the accuracy of the application by the ANSPs of the principles of eligibility of ANS costs as well as the application of the respective cost allocation methodology described in the RP3 performance plans of the Member States concerned. The reviews did not evaluate the conformity of the respective RP3 cost allocation methodology with the relevant SES regulations.

4.2.1. Test of cost eligibility and allocation - based on cost samples

4.2.1.1 Methodology for testing cost samples

The testing of cost eligibility and allocation covered four cost categories: staff costs, other operating costs, depreciation costs, and the cost of capital, as defined in Implementing Regulation (EU) No 2019/317. For staff, other operating, and depreciation costs, sample-based tests of transactions were carried out to verify the eligibility and proper allocation of 2021 actual costs.

The review of staff costs sought to verify the eligibility and proper allocation of expenses such as gross remuneration, overtime payments, and employer contributions to social security schemes, in line with the applicable methodology. This involved examining documentation such as payroll records, employee contracts, and cost centre reports to ensure accurate attribution of staff costs to en route and terminal air navigation services.

Similarly, other operating costs were reviewed to confirm the eligibility of costs incurred for goods and services essential to air navigation services. This included scrutinising invoices, agreements, and proof of payment for items such as security services, utilities, and building rentals.

Depreciation costs were assessed to determine whether they were correctly calculated in accordance with the expected operating life of fixed assets, as per the methodology outlined by the relevant regulations, and using appropriate accounting methods.

Finally, the cost of capital was reviewed to validate its calculation and distribution across the en route and terminal cost bases. This involved evaluating the methodology used to calculate the weighted average interest rates on debts and return on equity.

4.2.1.2 Cost allocation findings with no impact on airspace users

Several Member States have overly complex cost allocation systems that hinder an easy verification. For instance, one Member State employs a multi-iterative allocation method that assigns costs to reporting tables one-way, lacking the capability to generate a comprehensive cost allocation report at each allocation stage. This limitation obstructs effective sampling and backward verification processes essential for validating the eligibility of cost bases.

Additionally, the reviews found a case of minor misallocation between en route and terminal costs in 2021. Specifically, costs that should have been allocated to airports outside the scope of the RP3 performance plan were inadvertently reported under en route costs. This misallocation did not have a notable impact on airspace users, accounting for less than 1% of the reported costs. Similar misallocations were identified in 2020 and 2022, with less than 0.3% of the en route cost base for each of the two years. The Member State quantified the misallocation and corrected the unit rates to reimburse the misallocated amounts to airspace users.

Another finding related to the allocation of other operating costs involved a clerical error where items were mistakenly allocated at a higher rate to en route costs instead of the intended 50%. Despite the percentage discrepancy, the financial impact on airspace users was minimal due to the low total value of the misallocated items. The error amounted to only 0.2% of the total other operating costs for 2021, covering both en route and terminal activities. It was concluded that this error did not significantly affect airspace users, as it did not alter the unit rate calculations in accordance with the provisions of Implementing Regulation (EU) 2019/317.

To prevent a worse-case scenario where a similar error involving larger sums could significantly affect the unit rate, it is recommended to use a robust accounting software and automatic double checks. Such measures would reduce the need for manual input, decreasing the likelihood of human error.

4.2.2. Economic oversight by the NSA

The reviews revealed gaps in the written documentation within the NSAs, particularly regarding their supervision of cost allocation, cost eligibility, and performance plan assessments. Most NSAs verbally confirmed their participation in oversight activities, including supervising cost allocation and cost eligibility, as well as maintaining regular communication with the ANSPs. However, there is a significant lack of written documentation to substantiate these actions, such as meeting minutes, reports, and other written evidence.

The lack of documentation, while not directly impacting airspace users financially, raises concerns about transparency and accountability. Without proper records, there is no documental evidence that the NSAs diligently worked to prevent ineligible costs from being passed on to airspace users.

To address this, specific recommendations to improve the written records have been made to NSAs to enhance transparency, accountability, and regulatory compliance in their economic oversight activities.

5. Conclusions and recommendations

The nine compliance reviews uncovered the reasons behind the significant discrepancies found by the PRB between the determined and actual costs reported by the Member States in 2021.

Regarding the cost differences, the reviews identified issues related to the headcount forecast for staff and other operating costs, as well as the forecast of risks (e.g. from collective agreements) and the regulatory treatment of accounting provisions. Additionally, there were notable gaps in the documentation and evidence related to the economic oversight by NSAs of the costs of ANSPs.

Improved coordination and consistent, well-documented interactions between the NSAs and ANSPs, with clear evidence and traceability, could significantly reduce these discrepancies and ensure better adherence to the SES regulations.