

Performance Review Body Advice on the Union-wide targets for RP4

Annex V – Alert thresholds

March 2024

COPYRIGHT NOTICE AND DISCLAIMER	© European Union, 2024 This report has been prepared for the European Commission by the Performance Review Body of the Single European Sky (PRB). Reproduction is authorised provided the source is acknowledged. However, neither the European Commission, nor any person acting on its behalf, may be held responsible for the use which may be made of the information contained in this publication, or for any errors which may appear, despite careful preparation and checking.
------------------------------------	--

TABLE OF CONTENTS

1	INTRODUCTION	2
2	IFR MOVEMENTS ALERT THRESHOLD	3
3	SERVICE UNITS ALERT THRESHOLD.....	5
4	REFERENCE VALUES ALERT THRESHOLD	7
5	RECOMMENDATIONS	8

1 INTRODUCTION

- 1 In accordance with point (b) of Article 9 (4) of the Implementing Regulation (EU) 2019/317 (herein referred to as the Regulation), together with the adoption of the Union-wide performance targets, the Commission should establish alert thresholds beyond which Member States may request a revision of the performance targets contained in performance plans. The Regulation specifies that these alert thresholds shall be based on:
 - The deviation of the actual traffic from the traffic forecast over a given calendar year, expressed as a percentage of IFR movements;
 - The deviation of the actual traffic from the traffic forecast over a given calendar year, expressed as a percentage of service units;
 - The variation of the reference values as a result of the seasonal updates of the Network Operations Plan (NOP) in comparison to the reference values from the latest version of the Network Operations Plan available at the time of drawing up the performance plan. This variation shall be expressed as a percentage of variation or as a fraction of minutes of en route ATFM delay, depending on the magnitude of the reference values.
- 2 During RP3, the alert threshold for IFR movements and service units was set at $\pm 10\%$ in any given calendar year. The alert threshold on the variation of the reference values was:
 - 0.05 minute of en route ATFM delay if the reference value from the latest version of the NOP available at the time of drawing up the performance plan is less than 0.2 minute of en route ATFM delay; or
 - 0.04 minute of en route ATFM delay increased by 5% of the reference value from the latest version of the NOP available at the time of drawing up the performance plan if the reference value is greater than or equal to 0.2 minute of en route ATFM delay.
- 3 This Annex to the PRB advice on the Union-wide targets for RP4 provides the Performance Review Body's (PRB) advice to the Commission for the establishment of the above-mentioned alert thresholds.
- 4 This Annex consists of the following sections:
 - Section 2 describes the advice on the IFR movement alert threshold;
 - Section 3 describes the advice on the service units alert threshold;
 - Section 4 describes the advice on the reference values alert threshold;
 - Section 5 includes the conclusions and recommendations.

2 IFR MOVEMENTS ALERT THRESHOLD

- 5 For RP3, the alert threshold on the percentage deviation between actual and planned IFR movements was set at $\pm 10\%$.
- 6 Figure 1 shows the variations of the Union-wide IFR movements forecasts scenarios in RP2, RP3, and RP4. The variation is defined as the percentage difference in absolute terms between high and base IFR movements scenarios (referred to as “High”) and between low and base IFR movements scenarios (referred to as “Low”).
- 7 The Union-wide percentage of variation from base forecasted scenarios increase significantly from 2021 to 2022, and from 2022 and 2023. This can be explained by the uncertainty caused by the recovery from the COVID-19 pandemic and the geopolitical scenario. As from 2024, the computed uncertainty decreases significantly, attaining similar values to RP2. Table 1 (next page) lists the Member States for which the previously calculated RP4 levels of the uncertainty (“High” and “Low”) surpass the 10%. This occurs in 2027, 2028, and 2029. All values have been calculated based on the STATFOR February 2024 forecast.
- 8 The calculated variation between high and base IFR movements scenarios is above or equal to 10% for one Member State in 2027, for six Member States in 2028, and for 15 Member States in 2029. When comparing the variation between low and base IFR movements forecasted scenarios, one Member State is above 10% in 2027, two Member States are above 10% in 2028, and 12 Member States in 2029.

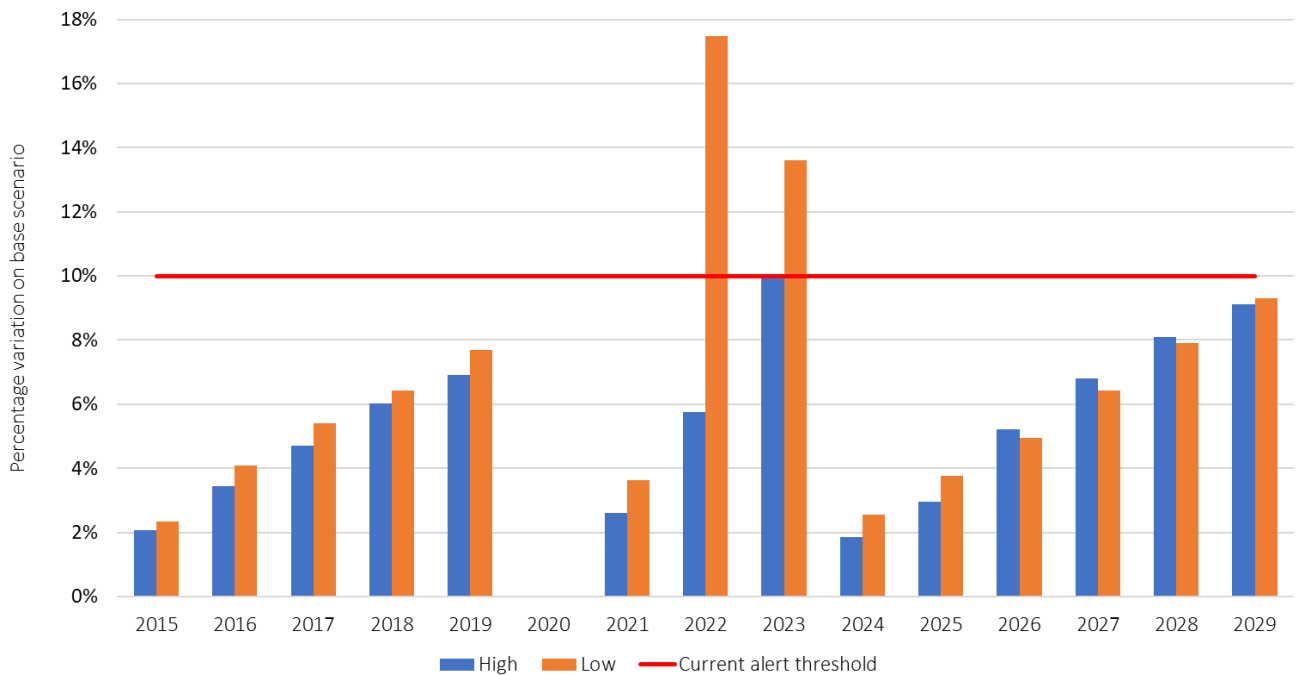


Figure 1 – Comparison of STATFOR high/low IFR movements forecasts variation with respect to the base forecasts from 2015 to 2029 (source: PRB elaboration on STATFOR forecasts).¹

¹ Data used: STATFOR February 2014 for RP2, STATFOR October 2021 for RP3, STATFOR February 2024 for RP4.

	2027	2028	2029
Variation between high and base IFR forecast scenarios which surpass or equal 10%	Cyprus	Cyprus, Estonia, Italy, Latvia, Lithuania, Malta	Bulgaria, Croatia, Cyprus, Estonia, Finland, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Sweden
Variation between low and base IFR forecast scenarios which surpass or equal 10%	Cyprus	Cyprus, Malta	Croatia, Cyprus, Estonia, Finland, Greece, Italy, Latvia, Lithuania, Malta, Slovakia, , Spain Continental, Sweden

Table 1 – Member States for which calculated IFR movements variation (High and Low) is above 10% for the period 2025-2029 (source: PRB elaboration on STATFOR February 2024 forecast).

3 SERVICE UNITS ALERT THRESHOLD

- 9 As for IFR movements, the RP3 alert threshold on the percentage deviation between actual and planned service units was set at $\pm 10\%$.
- 10 Figure 2 show the variations of the Union-wide service units forecasts scenarios in RP2, RP3, and RP4. The variation is defined as the percentage difference in absolute terms between high and base service units scenarios (referred to as “High”) and between low and base service units scenarios (referred to as “Low”).
- 11 Across reference periods, the calculated uncertainty varies significantly. In RP2 the variation between forecasted scenarios was below 10%, while in RP3 it increased significantly, reaching levels above 20% in 2022. This can be explained by the uncertainty caused by the recovery from the COVID-19 pandemic and the geopolitical situation.
- 12 The Union-wide percentage of variation from base forecasted scenarios is generally lower for RP4 compared to RP3. For the year 2029, the Union-wide variation is forecasted to be greater than 10% (+10.8% and -10.4%).
- 13 Table 2 (next page) lists the Member States for which the RP4 calculated levels of uncertainty (“High” and “Low”) surpass the 10%. All values have been calculated based on the STATFOR February 2024 forecast.
- 14 The calculated variation between high and base service units scenarios is above 10% for two Member States in 2025 and 2026, eight in 2027, 15 in 2028, and 21 in 2029. The calculated variation between low and base service units scenarios is above or equal to 10% for one Member State in 2025, two in 2026, six in 2027, increasing to 10 and 21 in 2028 and 2029, respectively.

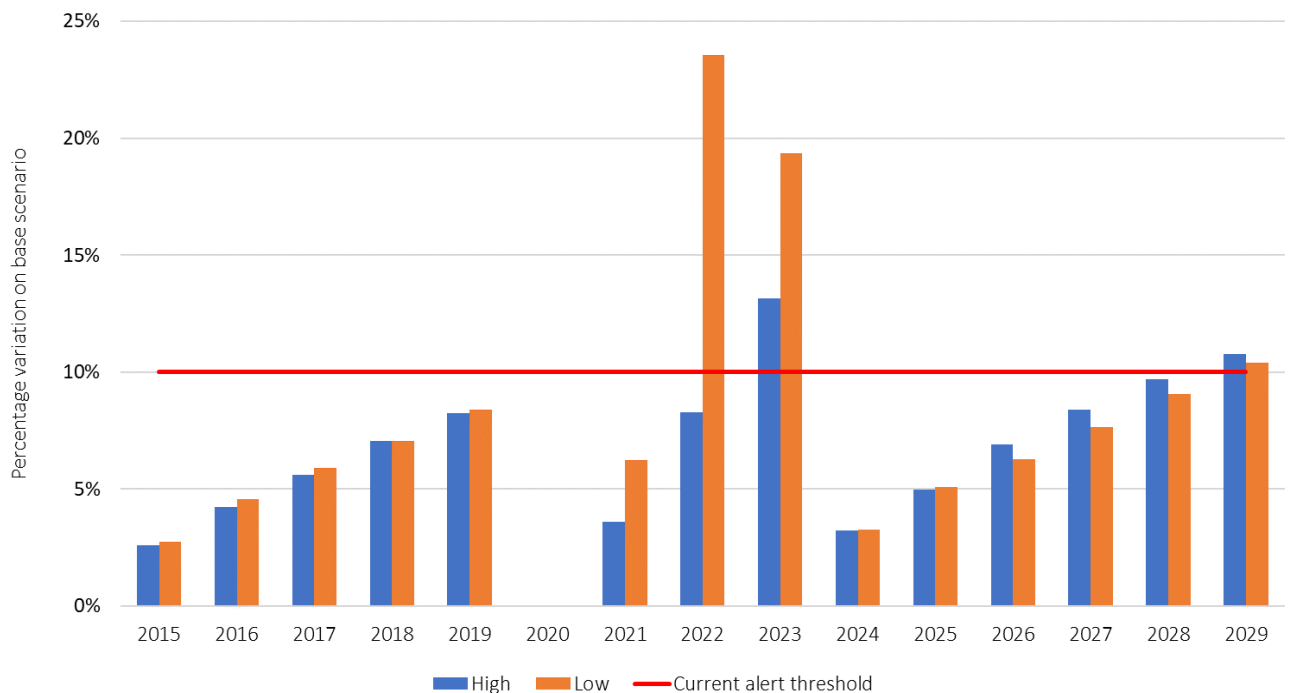


Figure 2 – Comparison of STATFOR high/low service units forecasts variation with respect to the base forecasts from 2015 to 2029 (source: PRB elaboration on STATFOR forecasts).²

² STATFOR February 2014 for RP2, STATFOR October 2021 for RP3, STATFOR February 2024 for RP4.

	2025	2026	2027	2028	2029
Variation between high and base SU forecast scenarios which surpass 10%	Finland, Malta	Finland, Malta	Croatia, Cyprus, Estonia, Finland, Latvia, Lithuania, Malta, Romania,	Austria, Croatia, Cyprus, Czech Republic, Estonia, Finland, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Norway, Romania, Switzerland	Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia, Sweden, Switzerland
Variation between low and base SU forecast scenarios which surpass or equal 10%	Malta	Finland, Malta	Cyprus, Estonia, Finland, Latvia, Malta, Romania	Croatia, Cyprus, Czech Republic, Estonia, Finland, Greece, Hungary, Latvia, Malta, Romania,	Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Norway, Poland, Romania, Slovakia, Slovenia, Spain Continental, Sweden ³ , Switzerland

Table 2 – Member States for which calculated variation (High and Low) is above 10% for the period 2025-2029 (source: PRB elaboration on STATFOR February 2024 forecasts).

³ The 2029 calculated uncertainty between low and base scenarios for Sweden is exactly equal to 10%.

4 REFERENCE VALUES ALERT THRESHOLD

- 15 The reference value is computed by the Network Manager as the value of en route ATFM delay for each Member State and FAB as to ensure that the Union-wide en route ATFM delay target is met.
- 16 The Regulation specifies that alert thresholds shall be based on the variation of the reference values as a result of the seasonal updates of the Network Operations Plan in comparison to the reference values from the latest version of the Network Operations Plan available at the time of drawing up the performance plan.
- 17 The comparison of the 2023 and the 2024 reference values shows no significant variations. Therefore, alert thresholds from RP3 still appear to be

proportionate and effectively tailored to the objectives of RP4. Setting them at the same level remains suitable:

- 0.05 minute of en route ATFM delay if the reference value from the latest version of the NOP available at the time of drawing up the performance plan is less than 0.2 minute of en route ATFM delay; or
- 0.04 minute of en route ATFM delay increased by 5% of the reference value from the latest version of the NOP available at the time of drawing up the performance plan if the reference value is greater than or equal to 0.2 minute of en route ATFM delay.

5 RECOMMENDATIONS_

- 18 In terms of IFR movements, Union-wide variations from the base forecast surpass the 10% threshold during the periods of the COVID-19 pandemic and Russia's war of aggression against Ukraine. As from RP4, Union-wide forecast levels are below the 10% benchmark. At Member State level, the forecasted variation is above 10% for one Member State in 2027, six Member States in 2028 and 16 Member States in 2029.
- 19 In terms of service units, Union-wide variations from the base forecast surpass the alert threshold during the periods following the COVID-19 pandemic and Russia's war of aggression against Ukraine. In the beginning of RP4 it decreases significantly. However, the Union-wide variation of the forecasts' scenario is above the threshold at the end of RP4 in 2029. At Member State level, during RP4 a significant number of Member States are expected to show variation from the base scenario greater than the alert thresholds (from one in 2025, to 21 Member States in 2029).
- 20 In terms of alert thresholds reference values, a comparison between 2023 and 2024 showed no significant variations.
- 21 The PRB recommends setting both IFR and service units alert thresholds at the same level as they are in RP3:
- An alert threshold for percentage variation of actual IFR movements in relation to the base forecast at 10%.
 - An alert threshold for percentage variation of actual service units in relation to the base forecast at 10%.
- 22 Regarding the reference values alert thresholds, the PRB recommends setting them at the same level than in the past reference values as they remain suitable:
- 0.05 minute of en route ATFM delay if the reference value from the latest version of the NOP available at the time of drawing up the performance plan is less than 0.2 minute of en route ATFM delay; or
 - 0.04 minute of en route ATFM delay increased by 5% of the reference value from the latest version of the NOP available at the time of drawing up the performance plan if the reference value is greater than or equal to 0.2 minute of en route ATFM delay.
- 23 The recommended alert thresholds give the flexibility to Member States to revise their plans during the reference period in line to accommodate to changing circumstances.