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1. Structure of the Report

The BEREC International Roaming Benchmark Data and Monitoring Report (hereinafter referred to as "the Report") consists of five parts and three annexes. While this chapter describes the **Structure of the Report**, chapter 2 provides an **Introduction** to the BEREC Report and describes BEREC's work on roaming in accordance with the Roaming Regulation (EU) 2022/6121 (hereinafter referred to as the "Roaming Regulation"). The key findings of this Report are presented in chapter 3 "**Main findings of the roaming benchmark data**" and chapter 4 "**Main findings on the transparency of roaming tariffs**". The fifth chapter "**Charts**" provides the latest available data on the domestic mobile market and international roaming mobile market, along with an overview of the transparency and comparability of retail roaming tariffs. "**Annex I: Methodology for the data collection**" provides a detailed description of the methodology for the current data collection. "**Annex II: Regulatory evolution**" outlines regulatory measures implemented to reduce price levels for roaming services within the EU. "**Annex III: List of respondents**" includes the list of operators that provided data for this Report. The Report is accompanied by a spreadsheet file enabling access to the data included in the Report (published together with the Report) as well as additional data on roaming.

2. Introduction

In accordance with the requirements set out in **Article 21(2) of the Roaming Regulation**, BEREC is mandated to regularly collect data to assess the competitive developments in Union-wide roaming markets. This includes monitoring retail and wholesale charges for regulated voice, SMS, and data roaming services, as well as wholesale charges applied for balanced and unbalanced roaming traffic. Additionally, BEREC collects data on the impact of the roll-out and implementation of next-generation mobile communications networks and technologies on the roaming market, the use of trading platforms and similar instruments, the development of machine-to-machine (M2M) roaming and IoT devices, and the extent to which wholesale roaming agreements cover quality of service (QoS) obligations and give access to different network technologies and generations.

BEREC is also tasked with gathering data from NRAs regarding the application of **fair use policies (FUP)** by roaming providers, the development of domestic-only tariffs, the application of sustainability mechanisms, complaints related to roaming services, and compliance with QoS obligations. Where necessary, NRAs are required to coordinate with other competent authorities to ensure the completeness of the collected data. Furthermore, **Article 21(2)** requires BEREC to collect and provide additional information on transparency, the application of measures for emergency communication, value-added services, and roaming on non-terrestrial public mobile communications networks.

BEREC shall also collect data on wholesale roaming agreements not subject to the maximum wholesale roaming charges defined in **Articles 9, 10, and 11 of the Roaming Regulation**. This includes monitoring the implementation of contractual measures at the wholesale level to prevent permanent roaming or anomalous or abusive use of wholesale roaming access for purposes other than providing regulated roaming services to customers while they are periodically travelling within the Union. Based on the collected data, BEREC reports on the evolution of pricing and consumption patterns across Member States, both for domestic and

[1] Regulation (EU) No. 2022/612 of the European Parliament and of the Council of 6 April 2022, available at: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32022R0612

roaming services, the actual wholesale roaming rates for unbalanced traffic between providers of roaming services, and the relationship between retail prices, wholesale charges, and wholesale costs for roaming services. BEREC also assesses the extent to which these elements are interconnected.
BEREC coordinates this extensive data collection process in order to allow a more streamlined and harmonized process (common templates, common definitions and deadlines), which ensures better consistency across all stakeholders.
This Report summarizes the findings from BEREC's data collection process, covering the period from **1 October 2024 to 30 September 2025**, which includes the **4th quarter of 2024**, and the **1st, 2nd, and 3rd quarters of 2025**. Historical data from before the **4th quarter of 2020** remain available for reference in supplementary materials published on the BEREC website. The Report not only highlights the current developments in the roaming market but also provides a detailed analysis of trends in pricing, consumption patterns, and compliance with regulatory obligations.

3. Main findings of the roaming benchmark data

More than 150 operators offering international roaming were involved in providing data for this Report, which is a broad spectrum of mobile network operators (MNOs) and mobile virtual network operators (MVNOs) in the EEA. This will ensure that the Report encompasses almost all major market participants, reflecting the broad coverage of the Roaming Regulation. BEREC believes that this Report provides a comprehensive overview of almost 95% of the mobile subscribers in the EEA, providing a representative insight into the present scenario of the Union-wide roaming market. The participation of both major and smaller network operators will ensure a balanced view of the developing roaming scenario.

Domestic prices for mobile services – Average Retail Revenue Per User (ARRPU)

BEREC continued its analysis of domestic retail prices for mobile services and found that it remains challenging to disaggregate revenue from different mobile communication services (voice, SMS, and data). This is primarily because these services are often offered as part of bundled packages that may include intra-EEA roaming services and, in some cases, even non-mobile services. Operators face difficulties in organizing revenue data by individual service categories (ISCs), such as fixed telephony, mobile telephony, fixed broadband, and others, due to the lack of a standardized methodology for this purpose. Bundles further complicate this process, as ISCs require allocating revenues from bundles to their individual components. Consequently, BEREC presents data based on the evolution of the average retail revenue per user (ARRPU) for mobile communications, with the caveat that these results should be interpreted cautiously. The analysis relies on data provided by operators for domestic mobile services. In Q3 2025, the weighted ARRPU for the European Economic Area (EEA) was 11.53 EUR per month. This represents a slight increase from 11.50 EUR in Q2 2025 and 11.44 EUR in Q1 2025, while in Q4 2024 the value was at the level of 11.53 EUR per month. ARRPU continues to vary significantly between countries, ranging from a low of 5.11 EUR to a high of 28.74 EUR.

Despite the significant country-level differences, the EEA-wide average ARRPU remains relatively stable, with a slight upward trend in recent periods. (Figure 1).[2]

Intra-EEA roaming consumption patterns

The data collected for this report highlights stability in the percentage of subscribers roaming at least once per quarter, with the EEA-wide average being relatively stable in all quarters of this data collection (Figure 10).

Rest of the World (RoW) roaming retail prices

Voice roaming tariffs increased in Q3 2025, with the outgoing call tariff increasing to 26.69 EUR cents per minute from 26.16 EUR cents per minute in Q2 2025. However, the incoming average price per minute remained relatively constant at 13.53 EUR cents per minute, compared to 13.45 EUR cents per minute in the previous quarter.
SMS roaming tariffs increased from 10.67 EUR cents per SMS in Q2 2025 to 11.20 EUR cents per SMS in Q3 2025.
Data roaming tariffs dropped, decreasing from 5.05 EUR per GB in Q2 2025 to 4.42 EUR per GB in Q3 2025. Although there is a quarterly variation in the tariffs, the trend over the years has been a steady drop in data roaming tariffs.
Regarding the 'Rest of World' retail tariffs (Figure 27), the EEA average prices are shown in Table 1.

Table 1: The EEA average retail prices for Rest of World roaming services:

RoW retail prices (no VAT)	Q4 2024	Q1 2025	Q2 2025	Q3 2025
Voice calls made (EUR cents/minute)	27.12	26.50	26.16	26.69
Voice calls received (EUR cents/minute)	13.75	14.27	13.45	13.53
SMS (EUR cents/unit)	8.85	9.63	10.67	11.20
Data (EUR/GB)	5.12	5.47	5.05	4.42

Non-terrestrial network – retail prices

BEREC has also updated its assessment of retail prices for non-terrestrial network services using data from Q4 2024 to Q3 2025. During this time, there were large variations in prices for all services, especially for voice communications and data services. The price of outgoing calls was highest during this time at 71.05 EUR cents per minute in Q4 2024, but then fell sharply to 20.74 EUR cents per minute in Q3 2025. The price of incoming calls also fell from 41.87 EUR cents per minute in Q4 2024 to 13.58 EUR cents per minute in Q3 2025. The price of SMS remained relatively stable, from 12.46 EUR cents per SMS in Q4 2024 to 15.18 EUR cents per SMS in Q3 2025. Data prices, measured in EUR per GB, varied from 166.68 EUR per GB in Q4 2024 to 149.37 EUR per GB in Q3 2025. In comparison to the previous year, average retail prices fell for all service types. However, these trends must be considered in the context of the early stages of the non-terrestrial network market and the recent launch of such data collection by BEREC, which may be contributing to variations in unit prices over

[2] BEREC would like to note that the disproportion between national individual ARRPUs could also be caused by different methodologies used by roaming providers to allocate the revenues between mobile communication services and non-mobile communication services.

time.
These prices are further detailed in Table 2, and also illustrated in Figure 28.

Table 2: The EEA average retail prices for roaming services on non-terrestrial networks:

Non-terrestrial network payments (no VAT)	Q4 2024	Q1 2025	Q2 2025	Q3 2025
Voice calls made (EUR cents/minute)	71.05	55.44	49.02	20.74
Voice calls received (EUR cents/minute)	41.87	30.70	28.08	13.58
SMS (EUR cents/unit)	12.46	13.51	15.86	15.18
Data (EUR/GB)	166.68	118.61	149.14	149.37

Wholesale roaming rates for outgoing calls

The average wholesale prices for intra-EEA roaming voice calls continued to decrease from Q4 2020 to Q3 2025, as depicted in Figure 13. The average EEA rate for total traffic remained relatively stable in the new regime at approximately 1.29 EUR cents, although a slight rise to 1.30 EUR cents was noticed in Q2 2025. Correspondingly, balanced traffic rates experienced changes and the rates remained relatively stable between 1.45 EUR cents in Q1 2025 and 1.61 EUR cents in Q3 2025. Unbalanced traffic rates also indicated a general stabilisation trend with price changes, ranging from a low of 1.15 EUR cents in Q3 2025 to a high of 1.33 EUR cents in Q1 2025 (see Table 3).

Table 3: The EEA average rates for wholesale calls (total, balanced and unbalanced traffic) and applicable wholesale price caps:

Wholesale voice (no VAT)	Q4 2024		Q1 2025		Q2 2025		Q3 2025	
	Price Cap	EEA Average	Price Cap	EEA Average	Price Cap	EEA Average	Price Cap	EEA Average
Total traffic (EUR cents/minute)	2.20	1.29	1.90	1.29	1.90	1.30	1.90	1.29
Balanced (EUR cents/minute)		1.53		1.45		1.54		1.61
Unbalanced (EUR cents/minute)		1.16		1.33		1.28		1.15

Wholesale roaming rates for SMS

As shown in Figure 18, the average rate for SMS services while roaming within the EEA for total traffic volumes decreased from 0.34 EUR cents in Q4 2020 to 0.15 EUR cents in Q3 2025, and remained below the relevant regulatory price cap throughout the period. For balanced traffic volumes, the average rate for the same services decreased from 0.41 EUR cents in Q4 2020 to 0.24 EUR cents in Q3 2025. Although there are small increments in the quarters of the new periods, the rates remained at a low level and below the rates in the previous periods. The rates for unbalanced traffic volumes showed a steady decline from 0.28 EUR cents in Q4 2020 to 0.11 EUR cents in Q3 2025 (see Table 4).

Table 4: The EEA average prices for wholesale SMS (total, balanced and unbalanced traffic) and applicable wholesale price caps:

Wholesale SMS (no VAT)	Q4 2024		Q1 2025		Q2 2025		Q3 2025	
	Price Cap	EEA Average	Price Cap	EEA Average	Price Cap	EEA Average	Price Cap	EEA Average
Total traffic (EUR cents/unit)	0.40	0.14	0.30	0.16	0.30	0.17	0.30	0.15
Balanced (EUR cents/unit)		0.19		0.24		0.26		0.24
Unbalanced (EUR cents/unit)		0.10		0.11		0.12		0.11

Wholesale roaming rates for data

At the wholesale level, the data cap that applied in the EEA continued to reduce, with a further reduction coming into effect in Q1 2025, as shown in Figure 20.

From a more long-term view, the wholesale data roaming tariffs for total, balanced, and unbalanced traffic categories have fallen considerably since 2020, although there have been some short-term variations seen in the quarterly data.

During the most recent observation period, the wholesale data roaming tariffs for total, balanced, and unbalanced traffic categories remained below the respective applicable price caps. For total traffic, the EEA average wholesale price fell from 0.67 EUR per GB in Q4 2024 to 0.57 EUR per GB in Q1 2025, then rose slightly to 0.61 EUR per GB in Q2 2025, and then back to 0.57 EUR per GB in Q3 2025. For balanced traffic, the EEA average wholesale price fell steadily over the period, from 0.72 EUR per GB in Q4 2024 to 0.64 EUR per GB in Q3 2025. Unbalanced traffic followed a similar trend, with prices falling from 0.61 EUR per GB in Q4 2024 to 0.50 EUR per GB in Q2 2025 and remaining at this level in Q3 2025. Wholesale data roaming tariffs for total, balanced, and unbalanced traffic categories remained fairly stable over the period, with only modest variations from quarter to quarter and with all prices remaining below the applicable wholesale data caps (Figure 21).

In relation to wholesale data roaming tariffs, the EEA average prices for total, balanced, and unbalanced traffic, as well as the applicable wholesale price caps for the data collection period, are set out in Table 5.

Table 5: The EEA average prices for wholesale data (total, balanced and unbalanced traffic) and applicable wholesale price caps:

Wholesale data (no VAT)	Q4 2024		Q1 2025		Q2 2025		Q3 2025	
	Price Cap	EEA Average	Price Cap	EEA Average	Price Cap	EEA Average	Price Cap	EEA Average
Total traffic (EUR/GB)	1.55	0.67	1.30	0.57	1.30	0.61	1.30	0.57
Balanced (EUR/GB)		0.72		0.67		0.66		0.64
Unbalanced (EUR/GB)		0.61		0.52		0.50		0.50

Wholesale roaming agreements (Article 3)

Only a limited number of roaming providers submitted data on wholesale agreements under Article 3 of the Roaming Regulation. The available information suggests that MVNOs follow different approaches to accessing wholesale roaming services depending on whether they operate as full or light MVNOs. Full MVNOs mainly rely on wholesale resale agreements with their domestic host MNOs, while a smaller share also uses resale access from other domestic MNOs or, less frequently, hub-based access or bilateral agreements with foreign MNOs. Light MVNOs, by contrast, predominantly depend on simpler resale arrangements, reflecting their stronger reliance on the host MNO's network infrastructure.

Across wholesale voice, SMS and data agreements, the rates paid by MVNOs are generally higher than the EEA average wholesale rates analysed in this Report and tend to remain close to the applicable regulated caps (Figure 29, Figure 30 and Figure 31). Over the longer term, wholesale roaming agreement rates for voice, SMS and data have declined since 2020, although developments differ across services and countries. Wholesale voice agreements show a gradual reduction, wholesale SMS agreements a more consistent downward movement, while wholesale data agreements display greater variability, with reported rates ranging from levels close to the caps to substantially lower values (Figures 29–31). The analysis is based on a limited dataset, as not all NRAs submit data on wholesale agreements under Article 3. The results should therefore be interpreted with caution, while still providing indicative insights into the structure and evolution of wholesale roaming agreements within the EEA.

How wholesale costs and rates relate to each other

BEREC analysed the relationship between wholesale rates[3] and unit costs for roaming services[4], utilizing the Axon Consultants cost model[5] for estimations[6]. The Axon model provides a wide range of cost scenarios per country and service, reflecting different assumptions on traffic volumes, network architecture and cost allocation methodologies. In addition to Axon's outputs, the analysis incorporates estimates for transit costs (voice and data) and termination costs (voice service)[7].

For voice services, the EEA average wholesale price per minute remains consistently above both Axon's minimum and maximum cost estimates (Figure 32). Over the period Q4 2024 – Q3 2025, the average wholesale price remained at 1.29 EUR cents per minute, with a slight increase to 1.30 EUR cents in Q2 2025. During the same period, Axon's EEA average minimum cost estimates ranged between 0.85 and 0.86 EUR cents per minute, while the maximum estimates ranged between 0.91 and 0.94 EUR cents. The regulated wholesale price

[3] Apart for average wholesale rates, estimates based on the average of 5 lowest unbalanced rates submitted by the operators are also provided.

[4] Cost estimates are based on the Axon cost model (CNECT/2022/OP/0065), published by the European Commission in December 2024 applying a methodology consistent with the 2019 model. The model was updated in July 2025 but BEREC's calculations in BoR (25) 48 model were performed before the 2025 update.

[5] https://digital-strategy.ec.europa.eu/en/library/2025-update-mobile-cost-model-roaming-and-voice-call-termination-eu

[6] The analysis is based on the updated Axon cost model published by the European Commission in December 2024, applying a methodology consistent with the 2019 model. These cost estimations are based on tables about the maximum and minimum unit cost evolution for roaming voice service included BEREC's Opinion in 2025. They refer to EEA averages. The same holds for SMS and data services.

[7] Unit cost estimates are not available for Estonia, Finland, Latvia, Iceland, Lithuania, Liechtenstein and the Netherlands due to missing input data.

cap declined from 2.20 to 1.90 EUR cents per minute as from Q1 2025. The lowest prices paid and charged ranged between 0.10 and 0.12 EUR cents per minute.
For SMS services, the EEA average wholesale price per SMS remains relatively stable over Q4 2024 – Q3 2025, ranging between 0.14 and 0.17 EUR cents per SMS. Axon's estimated unit costs range between 0.13 and 0.14 EUR cents per SMS, while the EEA average wholesale price ranges between 0.14 and 0.17 EUR cents per SMS. In all quarters, the lowest prices paid and charged ranged between 0.01 and 0.02 EUR cents per SMS, remaining significantly below both the average wholesale price and the cost estimates.
For data services, the EEA average wholesale price per GB fluctuates over Q4 2024 – Q3 2025 (0.57 to 0.61 EUR per GB). During the same period, Axon's estimated unit costs range between 0.41 and 0.55 EUR per GB. Throughout the period, the average wholesale price remains above both the minimum and maximum cost estimates. At the same time, it remains well below the regulated price cap, which decreased from 1.55 to 1.30 EUR per GB as from Q1 2025. The lowest prices paid and charged range between 0.03 and 0.04 EUR per GB in all quarters.
Overall, the analysis shows that wholesale rates for voice and data services remained above Axon's estimated unit costs throughout the observed period, while SMS wholesale rates remained closer to the estimated cost range, although in several quarters exceeding the upper bound. Across all three services, the lowest observed prices were substantially below both the EEA average wholesale rates and the estimated cost benchmarks. Despite the reduction in regulated price caps between 2024 and 2025, no corresponding decrease in average wholesale prices is observed across services[8] (Figure 32).

MNOs and MVNOs

The difference between Mobile Network Operators (MNOs) and Mobile Virtual Network Operators (MVNOs) in roaming consumption patterns and wholesale roaming payments for voice calls, SMS, and data is noted. The analysis is based on Figure 37, Figure 38 and Figure 39. It is important to note that the data for MVNOs is collected from 14 NRA's submissions because MVNOs are not found in all EEA member countries, whereas the data for MNOs is collected from 29 NRA's submissions.
Voice call consumption, according to Figure 37, is higher for MNOs than MVNOs in most cases during the observation period, with few exceptions at the quarter level. Data consumption, as indicated by Figure 38, is higher for MNOs than MVNOs during the observation period. Although the quarterly figures show fluctuations, with periodic peaks and troughs over the years, there is a clear trend of a gradual increase in data consumption for both types of operators over time, with a clear difference between MNOs and MVNOs. The wholesale roaming charges for MVNOs (Figure 39) clearly show a downward trend over time for voice and data communications, although the SMS charges remain stable, with some quarterly variations. Over the services, the wholesale rates for MVNOs remain above the average levels in the EEA.
The figures clearly show the structural differences between MNOs and MVNOs in terms of roaming consumption levels and wholesale cost exposure. Although the usage patterns show some convergence at certain points in time, MVNOs continue to pay higher wholesale roaming

[8] BoR (19) 168 BEREC supplementary analysis on wholesale roaming costs is available at: https://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/8756-berec-supplementary-analysis-on-wholesale-roaming-costs

costs on average, which is a reflection of their structural position in the wholesale roaming market.

4. Main findings on the transparency of roaming tariffs

This part of the Report provides an overview of the transparency of roaming tariffs, meaning the availability of information about prices and conditions for each tariff, as well as simple procedures for customers to switch between tariffs.
In order to understand whether customers face transparent conditions (in the implementation of the RLAH regime), BEREC prepared two questionnaires, one addressed to roaming providers and one to NRAs.
Roaming providers were requested to provide information on the QoS, structure of tariffs for international roaming, alternative tariffs and tariffs without roaming. This questionnaire included questions focused on the availability of roaming tariffs and the conditions applied (price limitations in terms of volumes, geographical area or any other restrictions, as well as any linkages to domestic tariffs, FUPs or derogations). It also included questions regarding the information available to the customers of roaming providers.
NRAs were requested to provide information on end user complaints related to a lack of transparency as well as information on applications for sustainability surcharges.
A total of 29 NRAs and 148 mobile roaming providers operating in the EEA sent their responses to BEREC. Among the roaming providers, 100 of respondents were MNOs and 48 full MVNOs or light MVNOs/resellers.

4.1. Main findings regarding the questionnaire addressed to roaming providers

Quality of Service

In order to understand the impact of network technologies and generations on roaming, BEREC requested information about the network technology offered to subscribers while roaming[9]. Because several countries phased out their 3G service in 2023 and 2024 and 2G is in the process of being phased out, we do not report these figures any longer. As a result, 100 % of respondents stated that they offer roaming 4G services. In the period observed, 5G services were already available throughout the EEA. However, the state of the implementation varied greatly at national level. Roaming using standalone 5G was offered by 15 % respondents, whereas roaming via 5G non-standalone technology was offered by 83 % of respondents (Figure 44).
The most common reason that 5G standalone was not offered to subscribers when roaming in the EU/EEA was that it was not yet available locally, followed by technical implementation with other European MNOs pending, and “other” reasons.
According to the Roaming Regulation, a differentiation between technologies while roaming is possible only if such a differentiation is done at home. For the EEA, an average of 19 % of roaming providers responded that they differentiate between technologies at home, 80 % indicated that they do not have such a differentiation and 1 % replied with “n.a.” (Figure 46).

[9] Since 1 July 2022 there is an obligation for operators to offer the same mobile network technology like at home when it is technically feasible while roaming.

Application of FUPs

BEREC observes that the FUP mechanisms foreseen by the Commission Implementing Regulation (EU) 2016/2286 (CIR) have been used by MNOs and MVNOs alike to prevent anomalous and abusive usage of regulated roaming services (Figure 47).
As regards the effectiveness of the FUP measures, it can be observed that the open data bundle is the most preferred FUP measure by respondents. Overall, the usage of different kinds of FUP measures is rather stable over the years.
According to the Roaming Regulation, roaming providers are entitled to apply a surcharge for the provision of roaming services, when exceeding the FUP. Figure 48 and Figure 49 show the share of the respondents, among those implementing different FUP measures, applying a surcharge to their customers for voice and data services.
Regarding the calculation of the minimum data roaming allowance which has to be granted to customers, providers which apply the open data bundle FUP are required to calculate the roaming allowance in accordance with the detailed formula set out in the CIR. In fact, 91 % of those providers replied that the limit determined by the CIR calculation is rounded up in favour of the customers.
Regarding FUP-related information provided to customers, Figure 50 shows that 74 % of the responding roaming providers applying an open data bundle FUP inform their customers about how the roaming allowance is calculated. Furthermore, 94 % of the roaming providers which established a FUP according to the open data bundle rule provide information for customers about their actual roaming volumes. Figure 51 shows various information channels for providing information about FUP for data bundles. Figure 52 shows where information about limits is located on the provider's website.

Non-EU/EEA destinations

According to the answers received, BEREC has noted that about 56 % of roaming providers deduct in some of their RLAH tariff plans roaming consumption at non-EEA destinations from the total package available to consumers through their RLAH tariff plans (Figure 53).

Alternative tariffs

BEREC has collected information on the type of packages offered as alternative roaming tariff (whether they are daily, weekly, monthly or other tariffs). According to the respondents, 33 % make use of the opportunity to offer alternative tariff plans in parallel to the provision of RLAH plans (Figure 54). Of all responding roaming providers which offer alternative roaming tariffs, 12 offer such tariffs in the form of daily packages, 13 in the form of weekly packages, 41 in the form of monthly packages and 16 in other packages (Figure 55).
Around 91 % of roaming providers inform end users about regulated and alternative tariffs. The most common ways to inform customers about alternative tariffs were call centres and websites, whereas for switching between tariffs, the most common ways were call centres and point of sales (Figure 58).
Roaming providers were also asked how they handle surcharges for alternative tariffs in EEA vs. non-EEA countries. 18 % of respondents indicated that they apply a surcharge for roaming in EU/EEA destinations to some of the alternative tariffs. For these alternative tariffs with a surcharge for EEA roaming, 48 % of the respondents with such surcharges indicated that they include non-EU/EEA destinations with no surcharge or at a reduced rate (Figure 57).

Information and tools for consumers

59 % of respondents provide information to consumers about the differences between different network technologies and generations in a roaming context and 49 % of respondents provide information on QoS while roaming on a per-network basis. Additionally, Figure 59 shows the type of information that is provided to end-users during intra-EEA roaming if the granularity of the information is per visited network.
When asked whether the respondents provide information on prices for calling value-added services (VAS) in a roaming context, 77 % of roaming providers answered that they provided general information, 34 % provide exact VAS charges and 23 % provide other types of information (Figure 60).
Roaming providers must offer at least two cut-off limits by default, at 50 EUR and 100 EUR (or the equivalent in local currency). 92 % of roaming providers provide financial cut-off limits, while 32 % provide volume-based cut-off limits (Figure 62). 83 roaming providers allow end users to individually adjust their cut-off limits (Figure 64). According to the data collected, 32 % of respondents only provide the 50 EUR and 100 EUR cut-off limits.

Out of a total 148 respondents, 100 roaming providers offer information about how to avoid inadvertent roaming in border regions and 55 offer tools to opt out of roaming in RoW. Regarding non-terrestrial networks, 86 roaming providers offer information about how to avoid connecting to non-terrestrial networks and 55 roaming providers offer tools to opt out from connecting to non-terrestrial networks (Figure 66).
The Welcome SMS is an important instrument for increasing the transparency of roaming charges. However, which kind of information is provided to end users via Welcome SMS varies considerably, both within the EEA (Figure 68) and in a RoW roaming context (Figure 69).

Transparency of wholesale offers

The Roaming Regulation sets out a number of obligations on wholesale level, which now also extend to QoS. As the responses to BEREC's questionnaire show, roaming providers may experience different levels of ease of access to network technologies (Figure 70). In particular, regarding the implementation of roaming via different technologies, 32 roaming providers indicated problems with the implementation of VoLTE and 5 expressed difficulties with the implementation of 5G standalone (Figure 71). This could also explain why 27 respondents indicated that less than 20 % of their outbound roaming agreements include operational VoLTE or VoNR services (Figure 72).
69 % of respondents stated that network technologies and generations are not negotiated separately from roaming charges and 84 % of respondents indicated that pricing does not differ according to network technologies (Figure 73). 17 respondents explained that they have faced obstacles when concluding permanent roaming agreements (Figure 76) and 47 respondents indicated that they have special wholesale contracts/agreements for services provided by connected objects/devices (Figure 77).
Regarding the mechanisms used for reaching agreements on roaming prices, 71 respondents stated that they relied on direct agreements, 6 indicated that their host MNO negotiates pricing and 10 responded that they used trading platforms or hubs for these purposes (Figure 74).

4.2. Main findings regarding the questionnaire addressed to NRAs

Applications for sustainability surcharges

By way of derogation from offering roaming at domestic prices, roaming tariffs may include surcharges based on application of a provider and authorised by the NRA in order to ensure the sustainability of roaming provider's domestic charging model.
Figure 78 shows that the total number of applications received by NRAs has been decreasing since RLAH came into force up until 2024 and increased by one application between 2024 and 2025. It is worth mentioning that NRAs did not report increases regarding domestic-only tariffs.

Complaints on transparency issues received by NRAs

Section 5.6.13 provides detailed information regarding complaints received by the NRAs. Twenty NRAs reported complaints related to inadvertent roaming, while nineteen reported complaints on lack of information (Figure 80). However, the number of complaints reported might not give a complete picture of the total number of complaints regarding transparency issues, as in some countries, other bodies than the NRA might handle consumer complaints. This could also explain the fact that one NRA indicated that in their country, other authorities have been designated as competent for implementing parts of the Roaming Regulation.

5. Charts

5.1. Analysis of subscribers and those that use roaming services

5.1.1. Domestic average Retail Mobile Revenue per User (ARRPU)

Figure 1: Domestic mobile service: monthly retail revenue per subscriber (ARRPU), Q3 2025

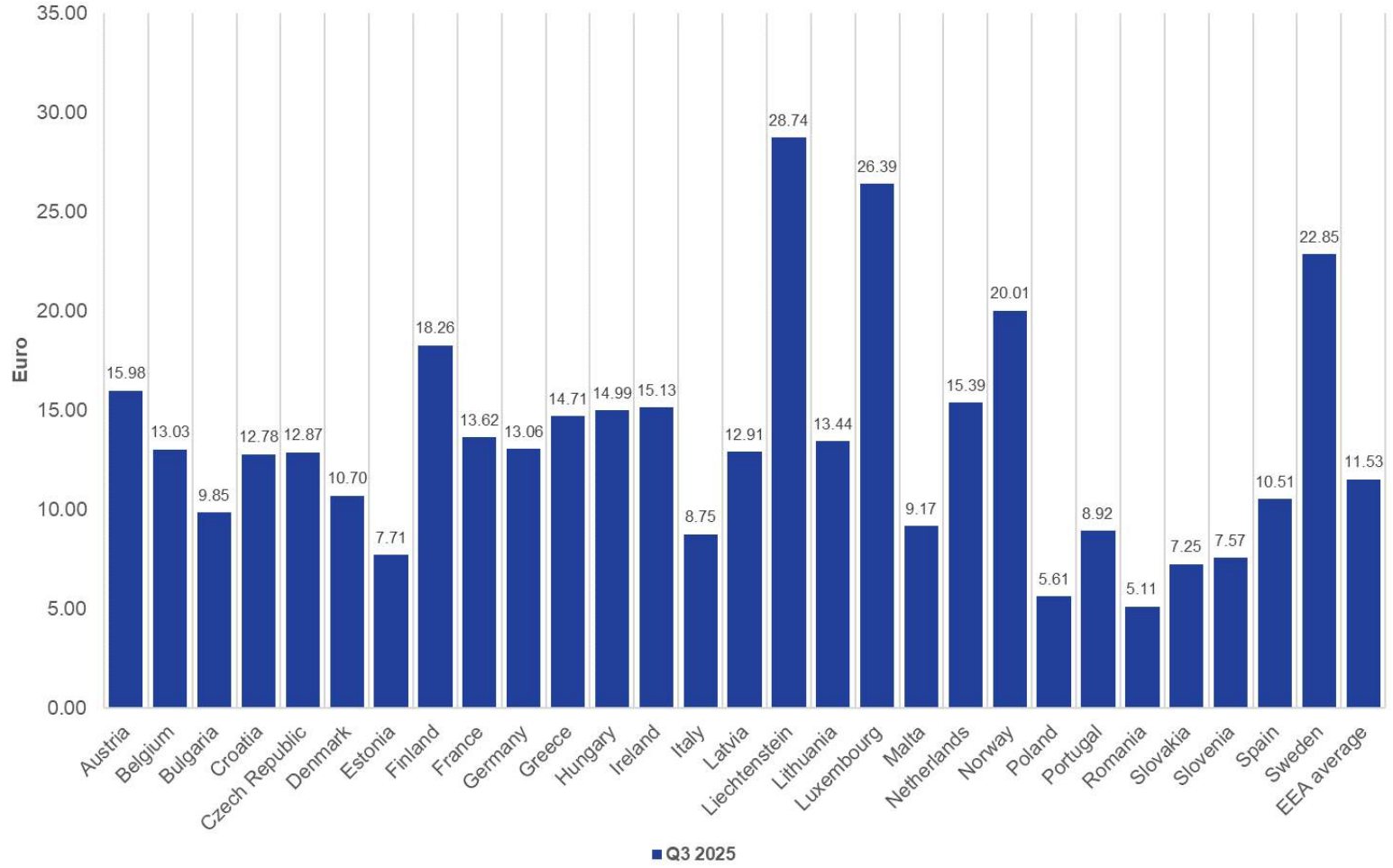


Figure 1 depicts the average retail revenue per user arrived at by a division of the quarterly retail revenue and the number of subscribers for each country, which is then divided by three to arrive at a monthly average for Q3 2025.
In some cases, not all operators provided the data for subscribers, or revenues.
Cyprus excluded.

Figure 2: EEA average: domestic mobile service: monthly retail revenue per subscriber (ARRPU), Q4 2020 – Q3 2025

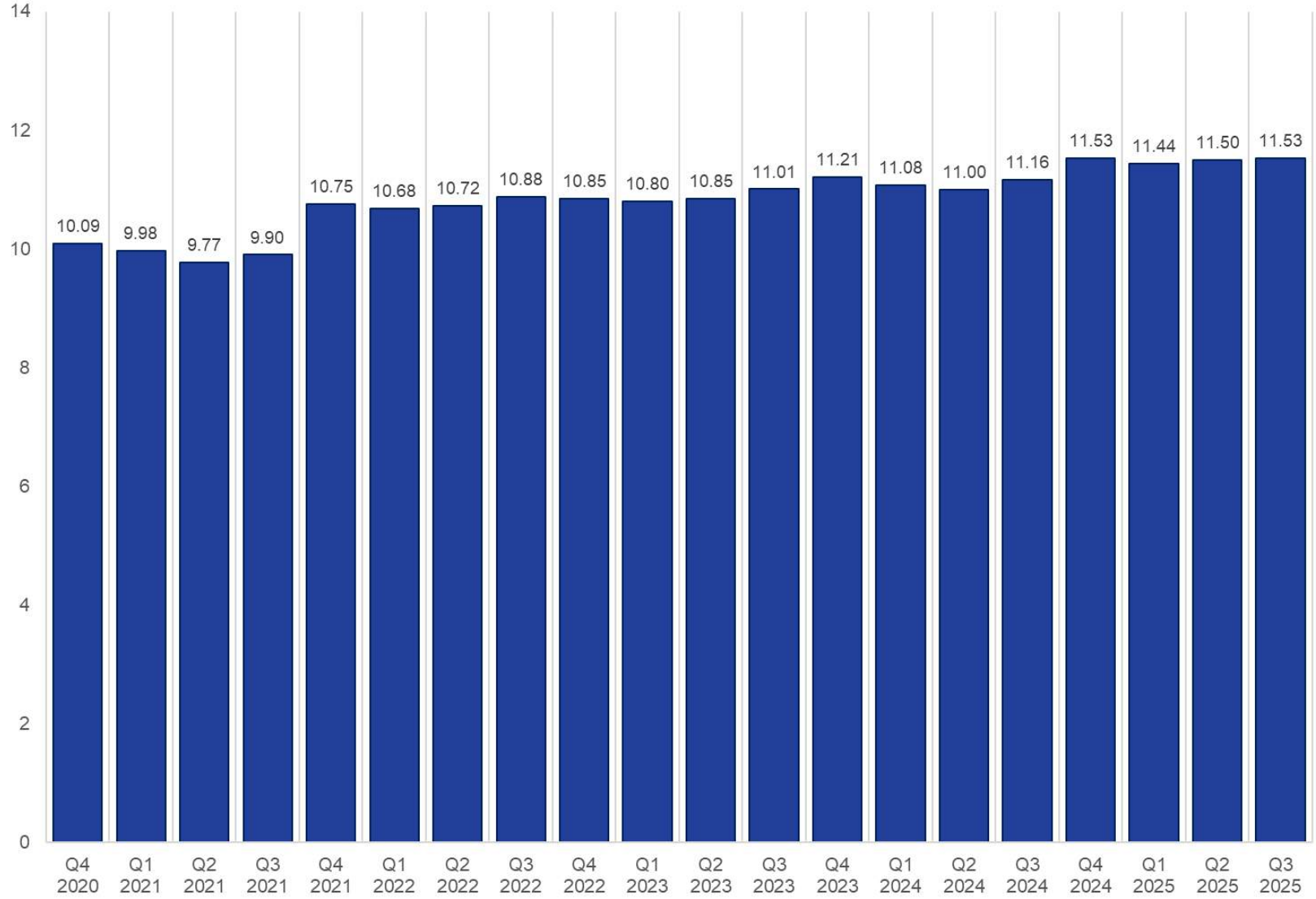


Figure 2 depicts the division of quarterly retail revenues of total EEA region by the total number of subscribers of the EEA region at the end of the quarter, divided by 3 to arrive at a monthly average, Q4 2020 - Q3 2025.

5.1.2. Consumption patterns for domestic mobile retail services

Figure 3: Domestic data services: average consumption per month per subscriber (GB), Q3 2025

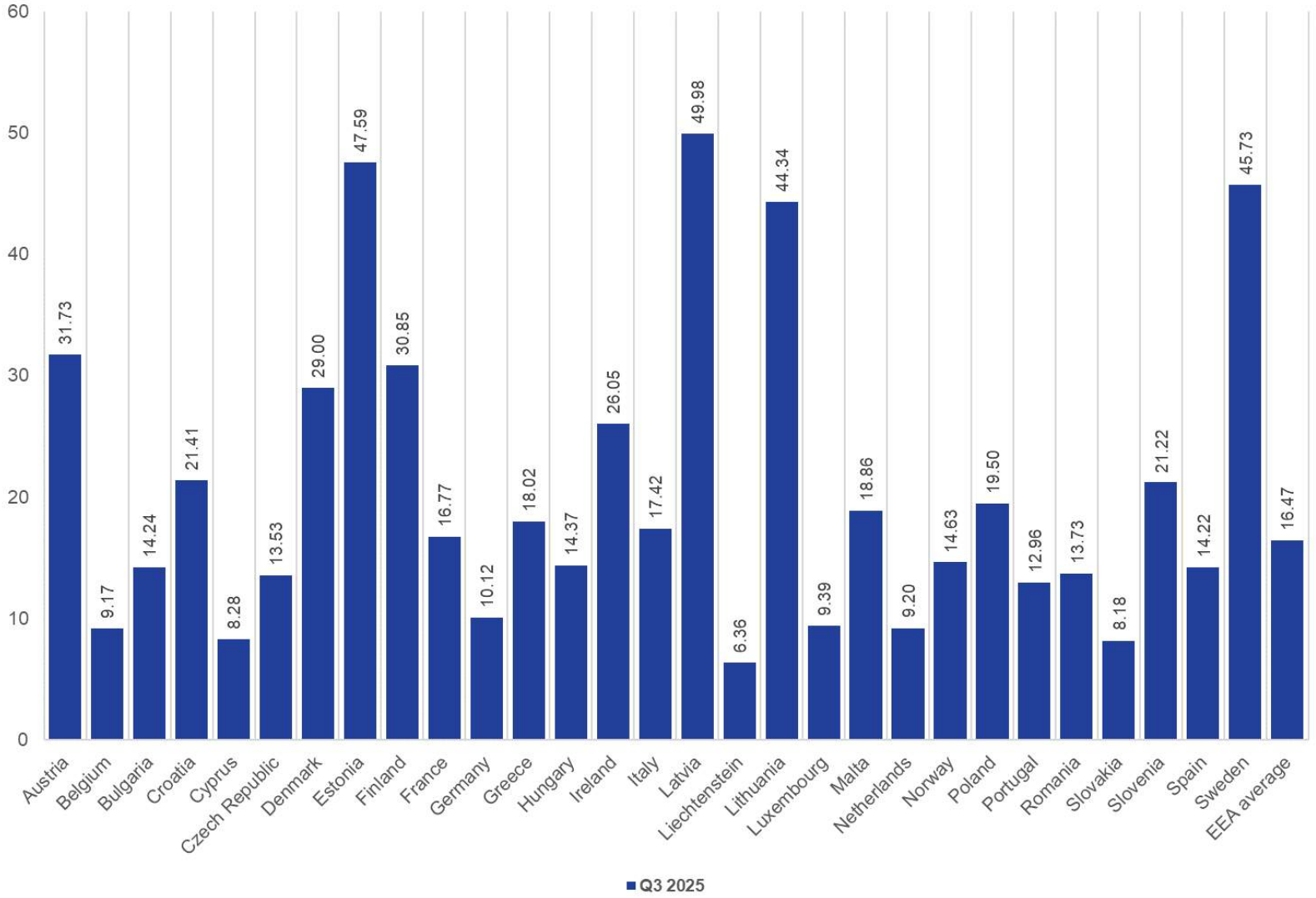


Figure 3 depicts the total data consumption per month per subscriber, for which the number of GB were divided by the total number of subscribers in each country and subsequently divided by three to arrive at monthly values for Q3 2025.

Figure 4: EEA average: domestic data services: average consumption per month per subscriber (GB), Q4 2020 – Q3 2025

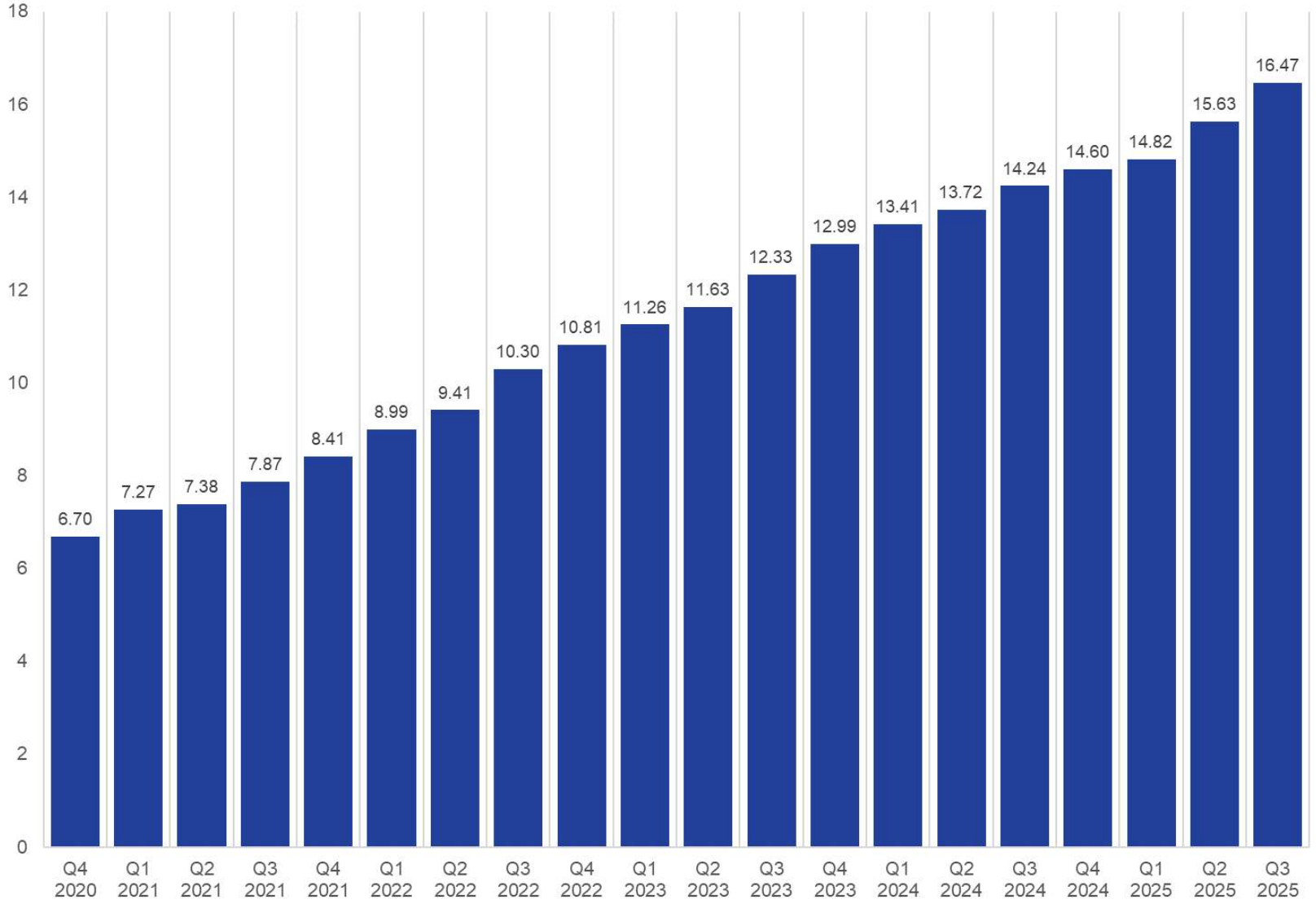


Figure 4 depicts the development of the EEA average data consumption per month per subscriber (in GB) for Q4 2020 – Q3 2025.

5.1.3. Consumption patterns for RLAH services (voice, SMS and data)

Figure 5: EEA average: number of RLAH minutes per month per roaming subscriber with active RLAH services, Q4 2020 – Q3 2025.

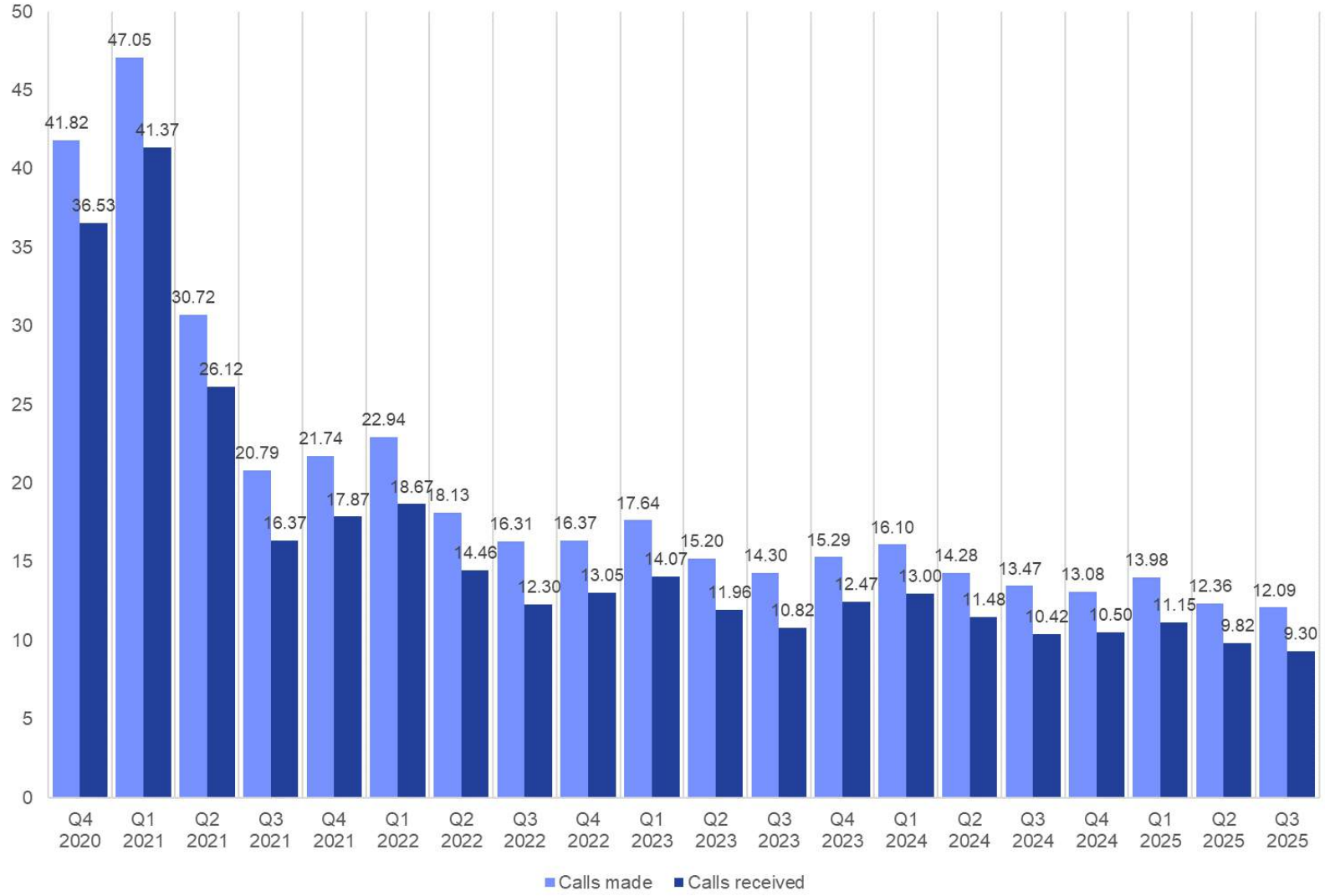


Figure 5 depicts the EEA average of the number of RLAH minutes for calls made and calls received. These averages are calculated, respectively, by dividing the number of roaming minutes per quarter by the total number of roaming subscribers with active RLAH services and again by three to arrive at monthly averages for Q4 2020 - Q3 2025. In some cases, not all operators provided the data for RLAH subscribers.

Figure 6: EEA average: number of SMS per month per roaming subscriber with active RLAH services, Q4 2020 – Q3 2025

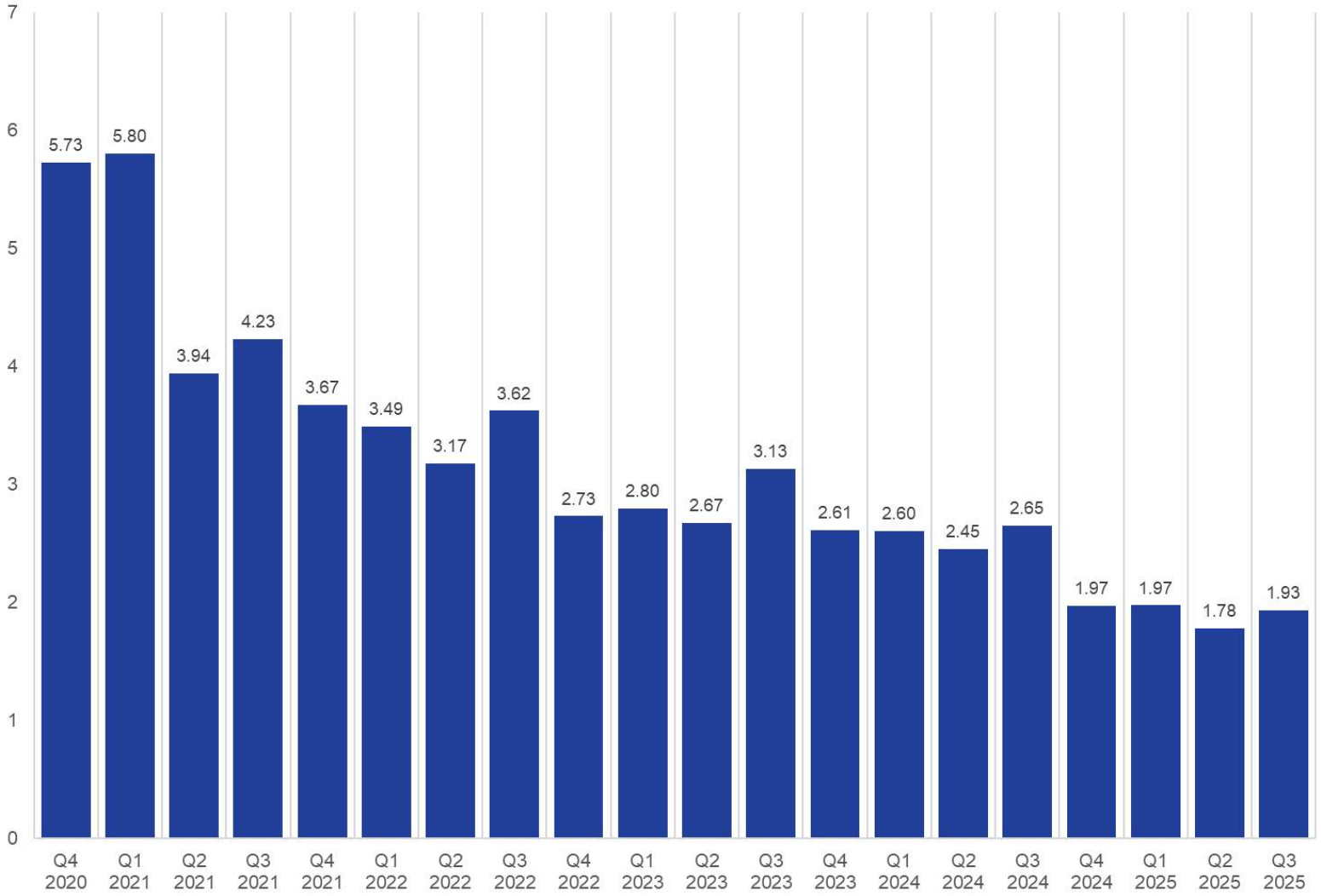


Figure 6 depicts the development of the EEA average of the number of RLAH SMS. This average is calculated by dividing the number of RLAH SMS per quarter by the total number of roaming subscribers with active RLAH services and again by three to arrive at monthly averages for Q4 2020 - Q3 2025.
In some cases, not all operators provided the data for RLAH subscribers.

Figure 7: Data services with active RLAH: average consumption per month per roaming subscriber with active RLAH services (in GB), Q3 2025

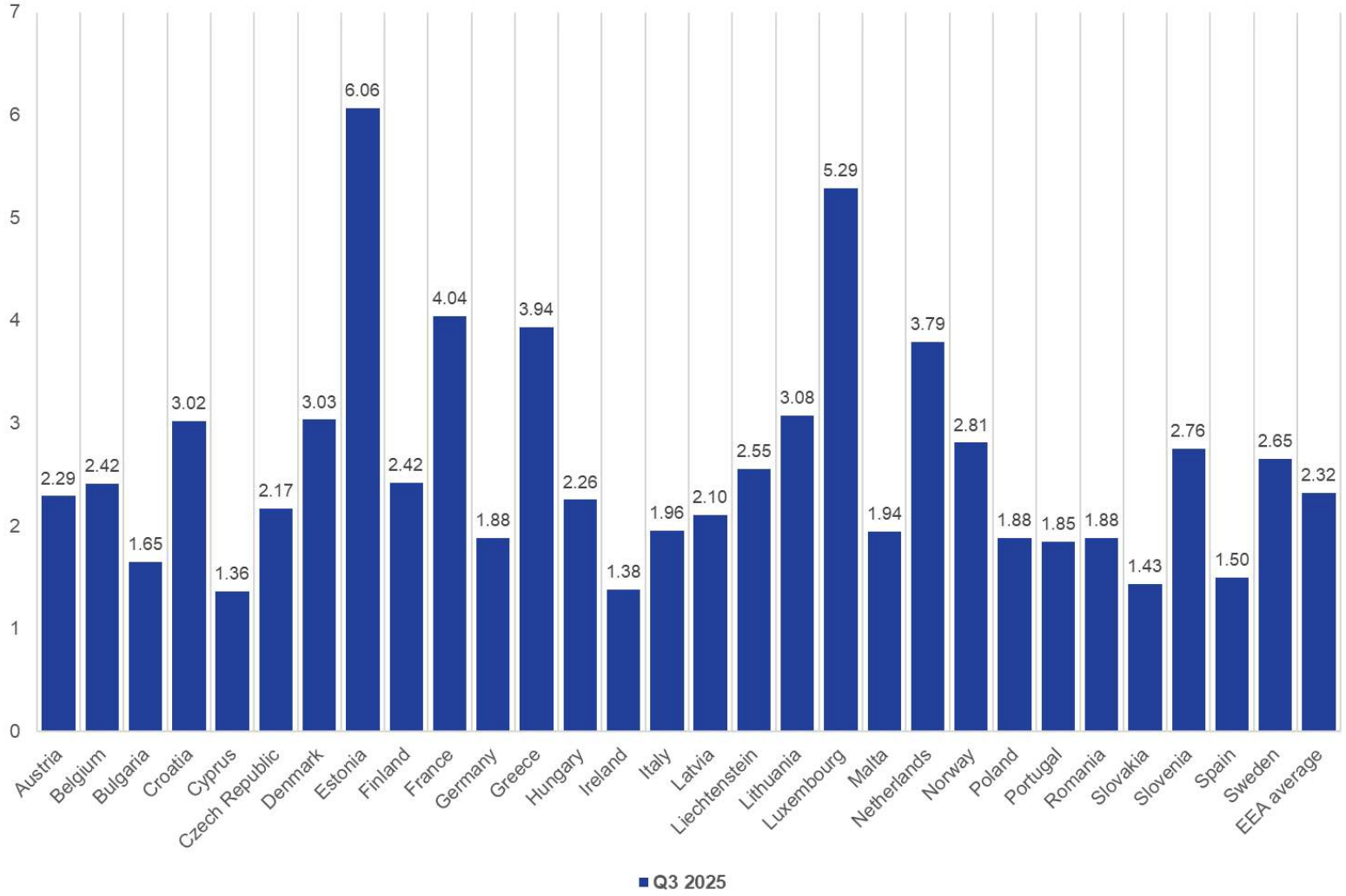


Figure 7 depicts the average RLAH data consumption on a per-country level. This average is calculated by dividing the number of RLAH GB per quarter by the total number of roaming subscribers with active RLAH services and again by three to arrive at monthly averages for Q3 2025. In some cases, not all operators provided the data for RLAH subscribers.

Figure 8: RLAH, data services: EEA average consumption per month per roaming subscriber with active RLAH services (in GB), Q4 2020 – Q3 2025

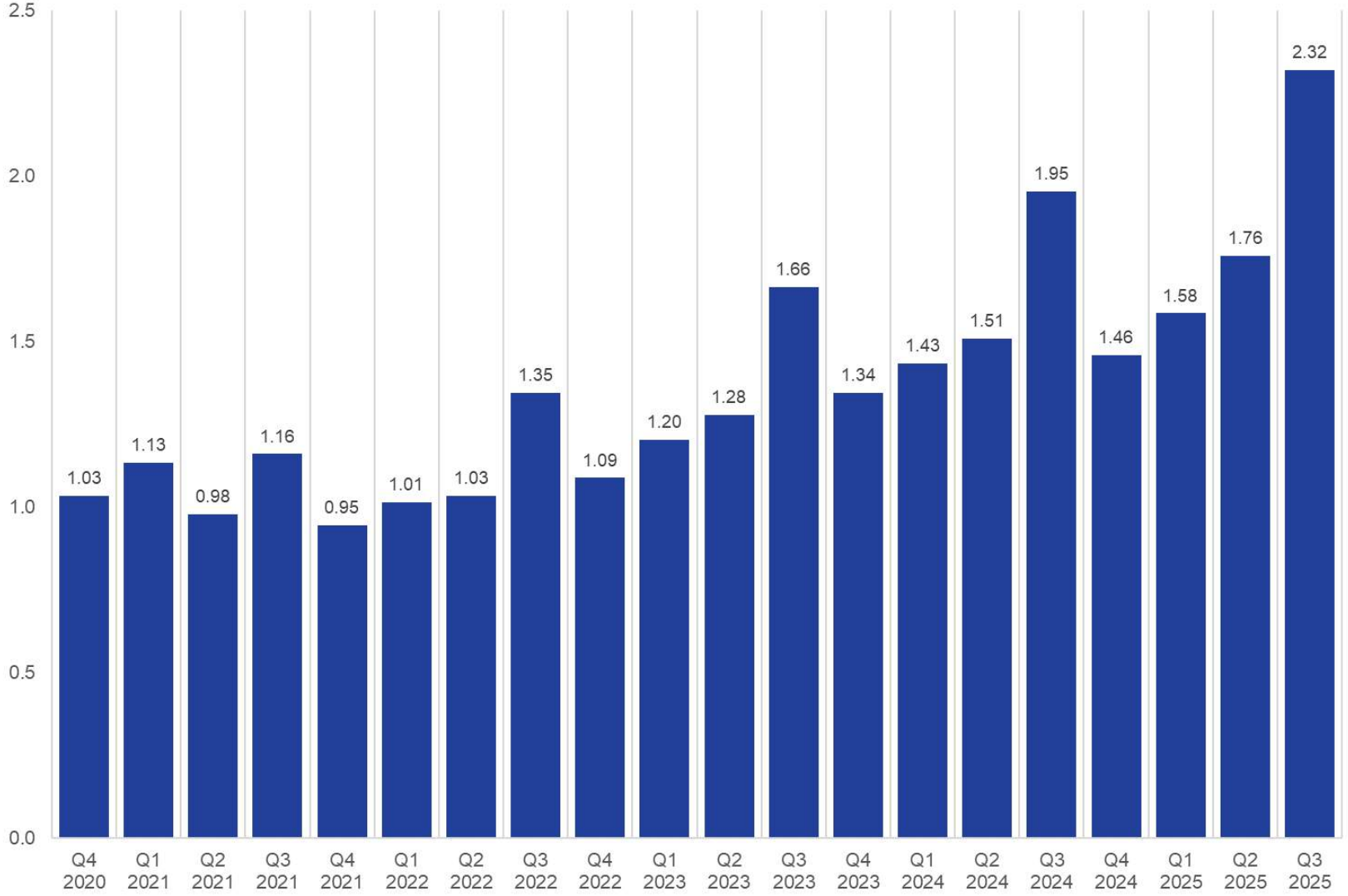


Figure 8 depicts the development of the EEA average RLAH data consumption (in GB) per roaming subscriber for Q4 2020 - Q3 2025.
In some cases, not all operators provided the data for RLAH subscribers.

Figure 9: Share of total subscribers with EU/EEA roaming enabled, Q3 2025

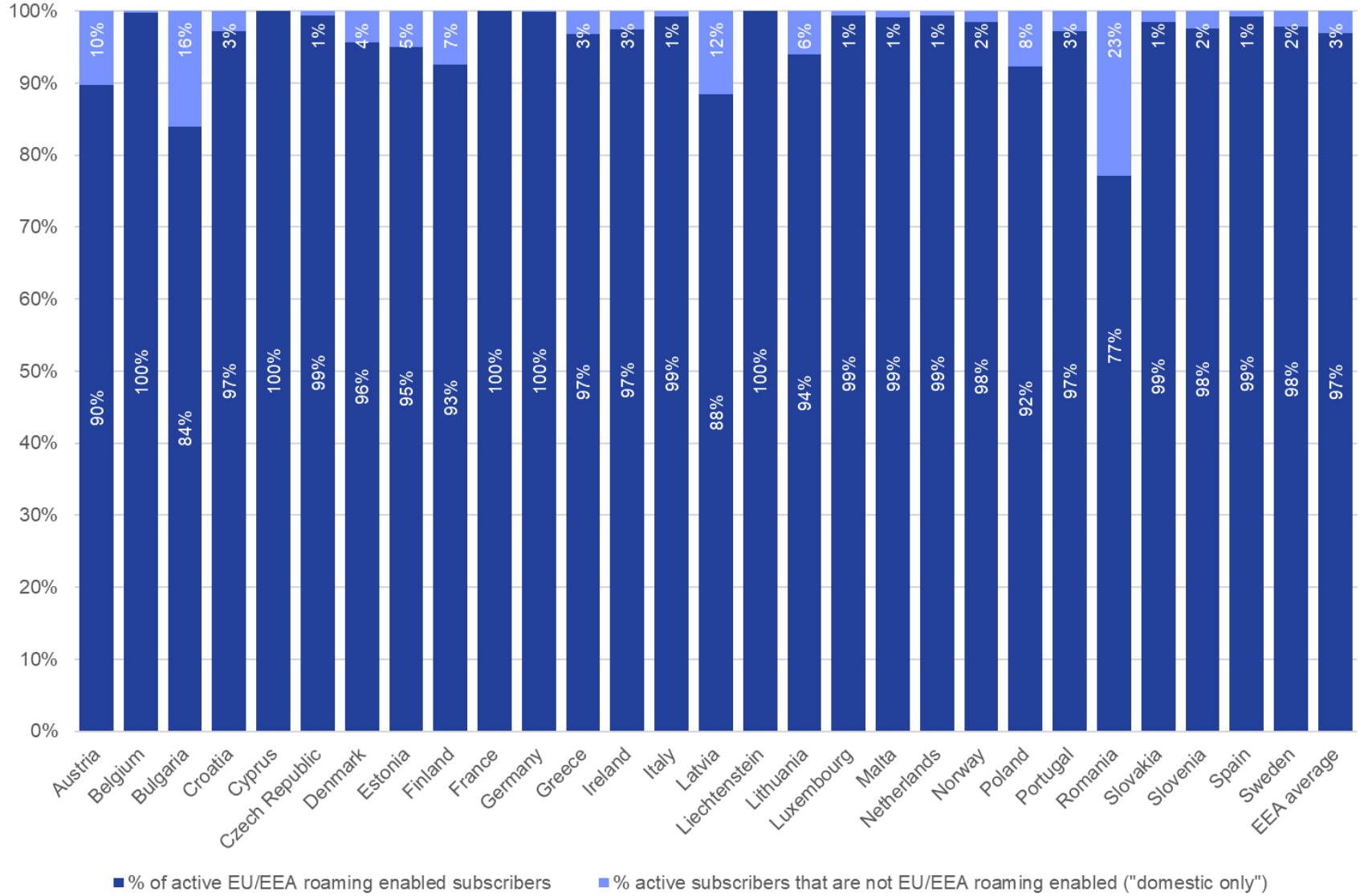


Figure 9 depicts the share of roaming-enabled subscribers per country. This share is calculated by comparing the number of active EU/EEA roaming enabled subscribers with the number of subscribers that are not EU/EEA roaming enabled (domestic only) to arrive at an average for Q3 2025.

Figure 10: Percentage of subscribers that were roaming at least once in the concerned quarter in the EEA, compared to the total number of subscribers who have roaming enabled subscriptions, Q4 2020 – Q3 2025

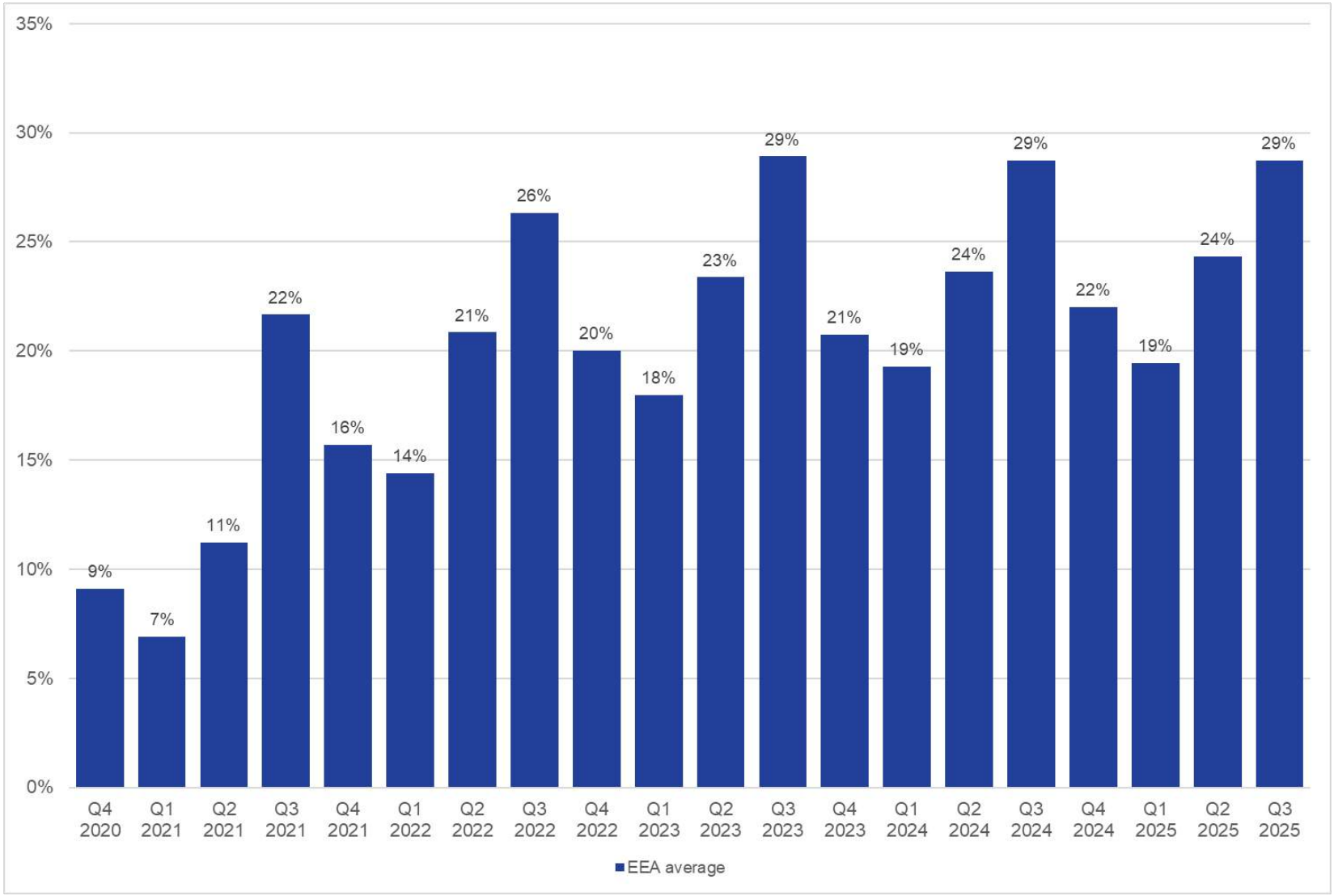


Figure 10 depicts the development of the percentage of subscribers that were roaming at least once in the concerned quarter in the EEA (compared to the total number of subscribers who have roaming enabled subscriptions) for Q4 2020 – Q3 2025.

Figure 11: Number of roaming days per active roaming SIM per quarter, by quarter, Q4 2021 – Q3 2025

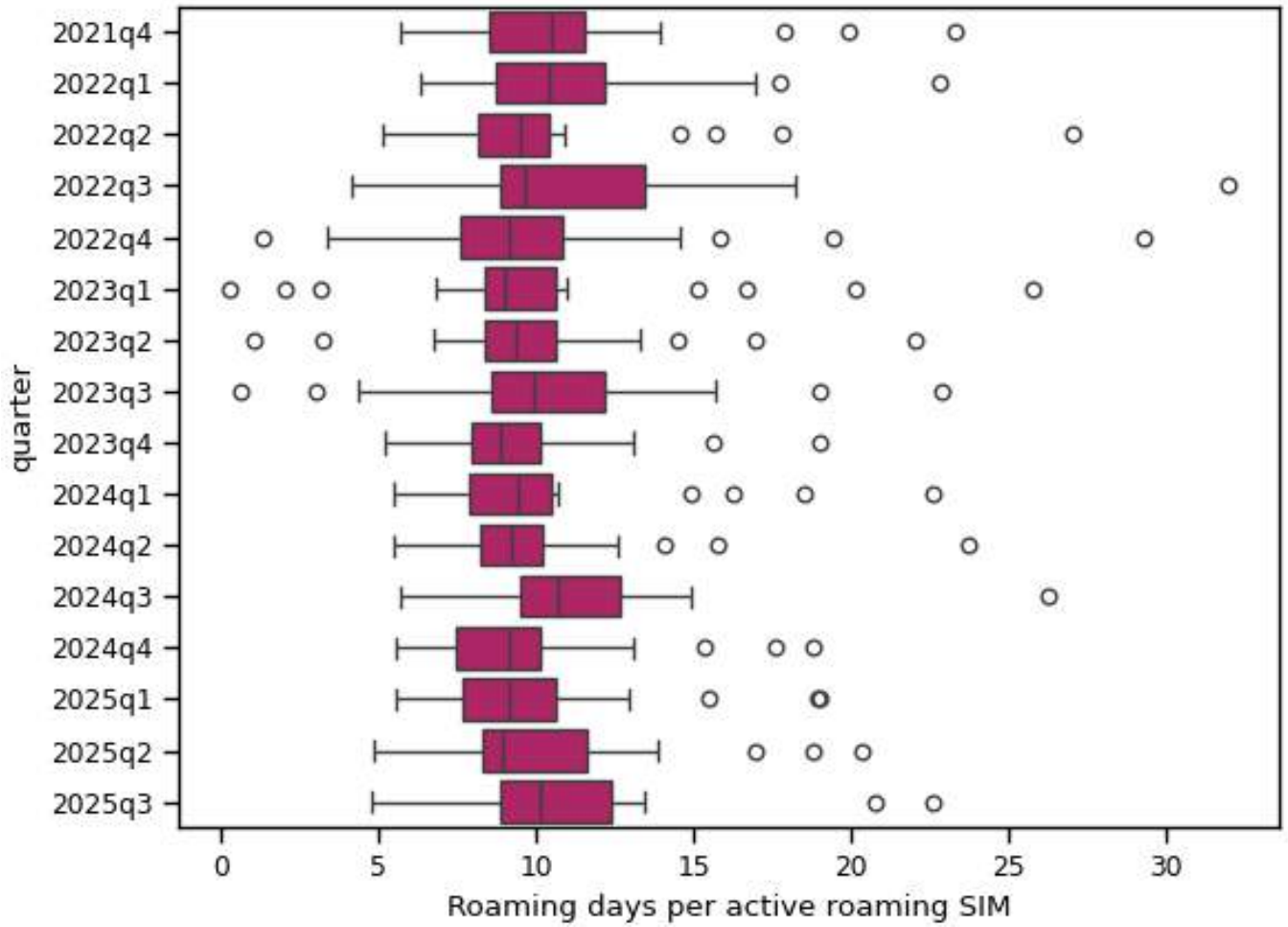


Figure 11 shows the distribution of the number of roaming days per active roaming SIM by quarter. For this graph, we only include data from operators that provided values for both “Total number of days that active SIMs were roaming in the EU/EEA” and “Number of active SIMs that were roaming at least once in the concerned quarter in the EU/EEA”.

The line inside the box represents the median value, meaning that 50 % of the data lies on the left hand side and 50 % lies on the right hand side. 25 % of observations have a value lower than the left edge of the box, and 25 % of observations have a value that is higher than the right edge of the box. The whiskers of a boxplot are a representation of a multiple (default: 1.5) of the interquartile range (IQR), which is the range of values covered by the inner box.

Figure 12: Number of roaming days per active roaming SIM per quarter, by country, Q1 2021 - Q3 2025

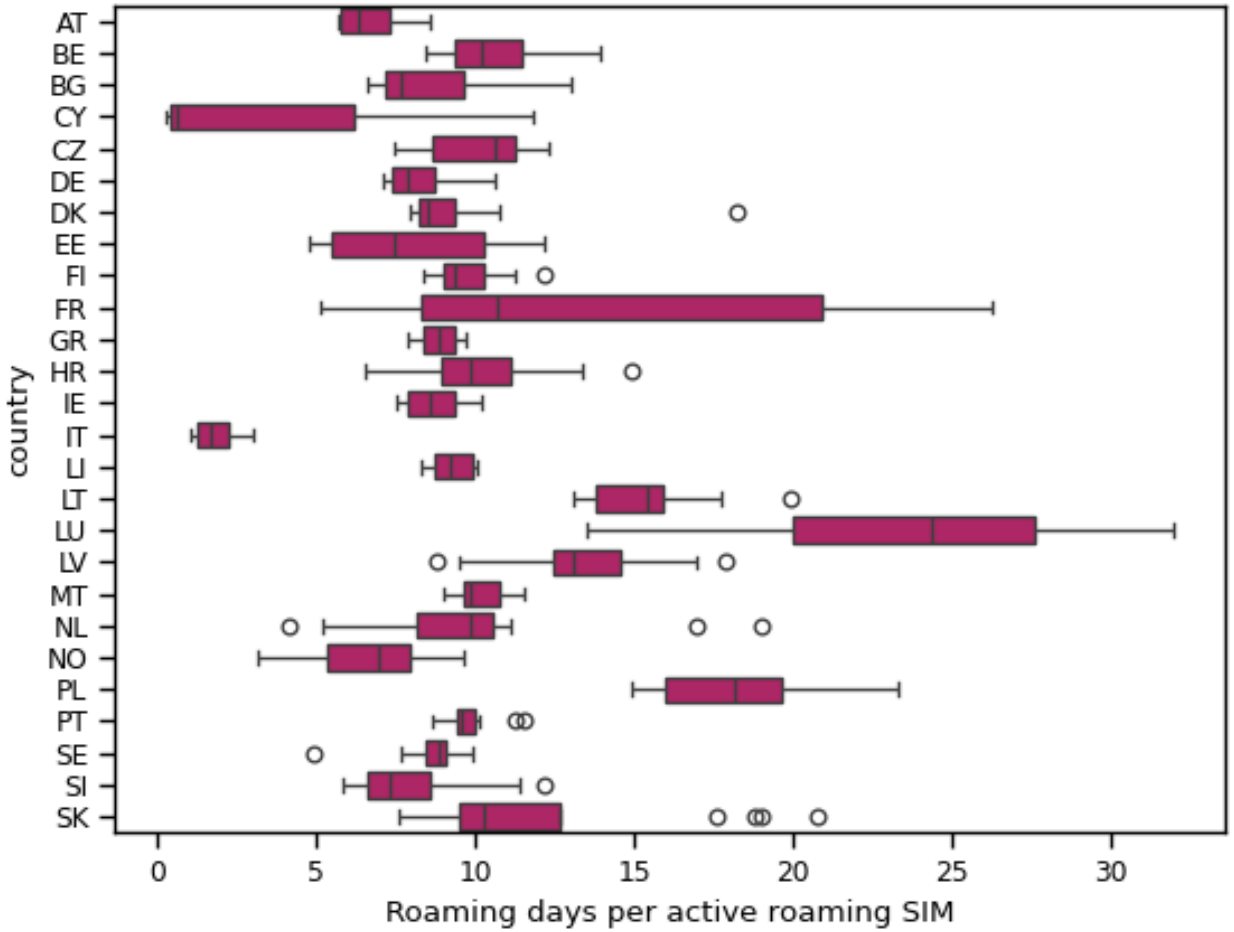


Figure 12 shows the distribution of the number of roaming days per active roaming SIM per quarter, by country for Q1 2021 – Q3 2025. For this graph, we only include data from operators that provided values for both “Total number of days that active SIMs were roaming in the EU/EEA” and “Number of active SIMs that were roaming at least once in the concerned quarter in the EU/EEA”.

The line inside the box represents the median value, meaning that 50 % of the data lies on the left hand side and 50 % lies on the right hand side. 25 % of observations have a value lower than the left edge of the box, and 25 % of observations have a value that is higher than the right edge of the box. The whiskers of a boxplot are a representation of a multiple (default: 1.5) of the interquartile range (IQR), which is the range of values covered by the inner box.

5.2. The development of Roaming Services

5.2.1. Voice roaming services

5.2.1.1 Wholesale rates

Figure 13: EEA and RoW average wholesale rates per minute, Q4 2020 – Q3 2025 (balanced, unbalanced, total and RoW traffic, and non-terrestrial network payments)

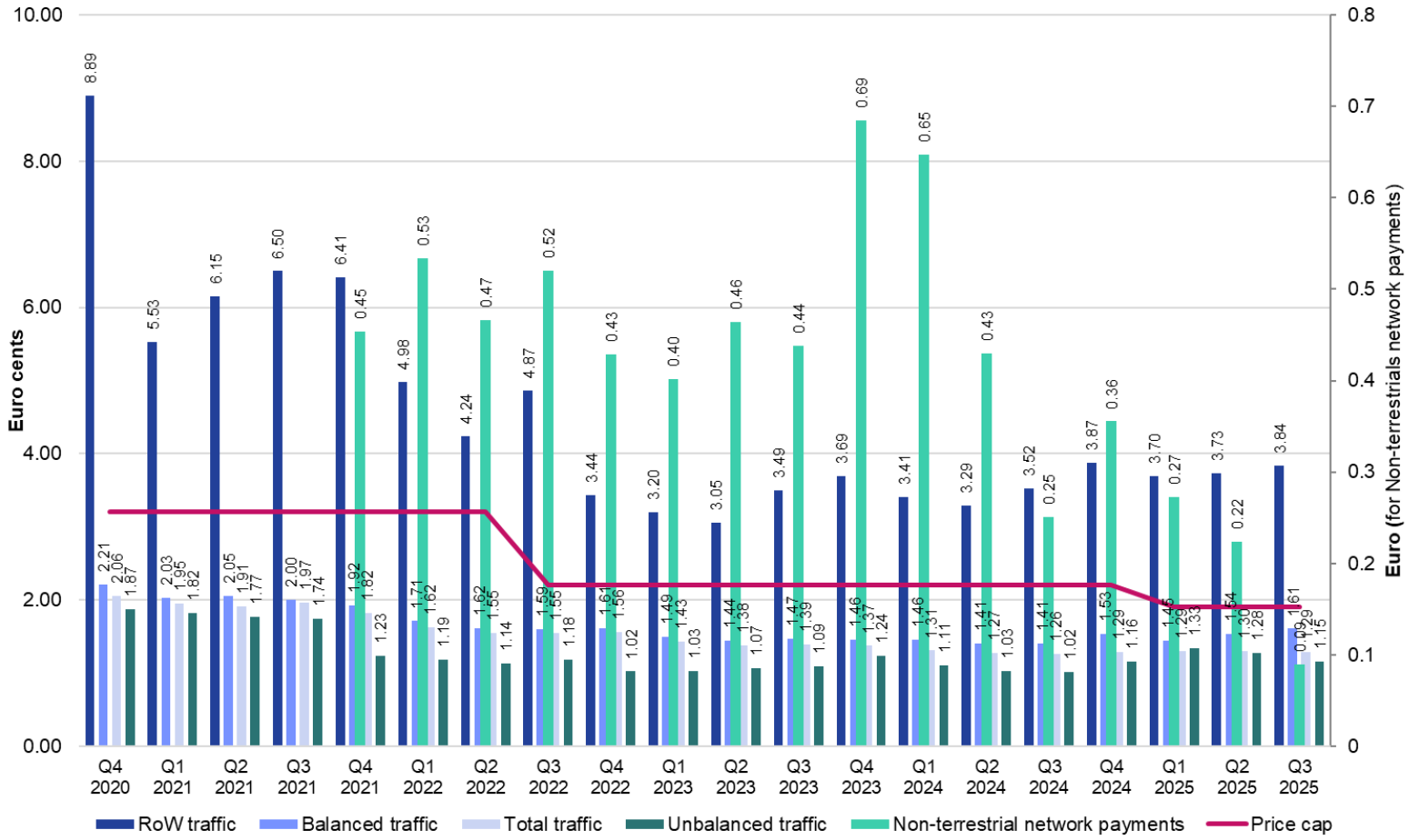


Figure 14 depicts EEA average wholesale rates for voice calls per minute for intra-EEA (balanced, unbalanced, and total), RoW and non-terrestrial network traffic, as well as the wholesale price cap applied. The average was calculated by dividing the wholesale revenues for minutes by the number of minutes in the respective category.

Please note that most MNOs report total data, while only some report balanced and unbalanced data.

5.2.1.2 Consumption patterns

Figure 14: EEA average: roaming calls made by share of tariff, Q4 2020 – Q3 2025

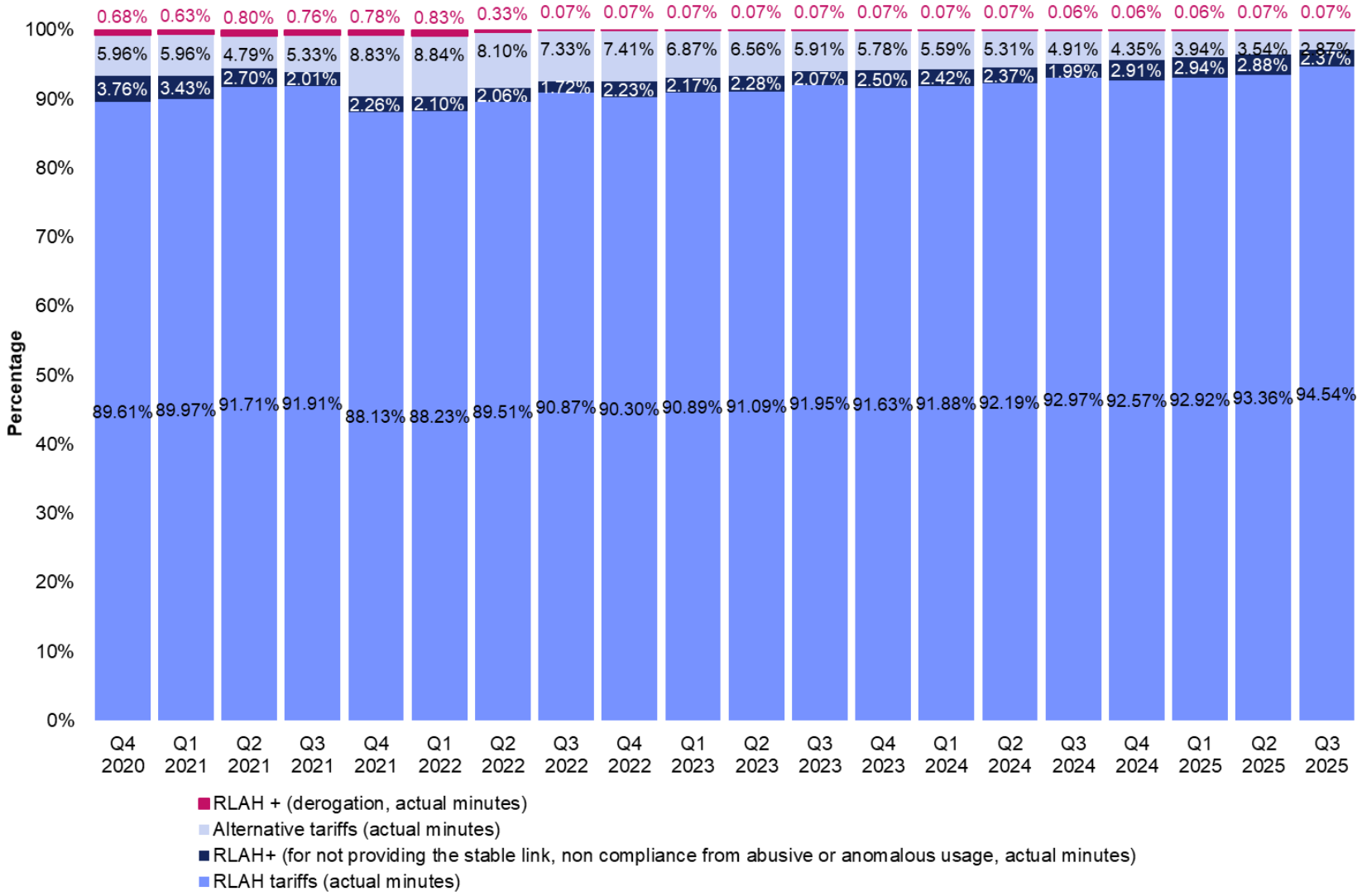


Figure 15 depicts the EEA average of the share of tariffs (RLAH tariffs, RLAH+ (derogation), RLAH+ (stable link, abusive/anomalous usage), Alternative tariffs) used for making roaming calls for Q4 2020 – Q3 2025. This average is created by calculating the contribution of each tariff to the total number of roaming calls made.

Figure 15: Roaming calls made: EEA average number of minutes per month per subscriber, Q4 2020 – Q3 2025

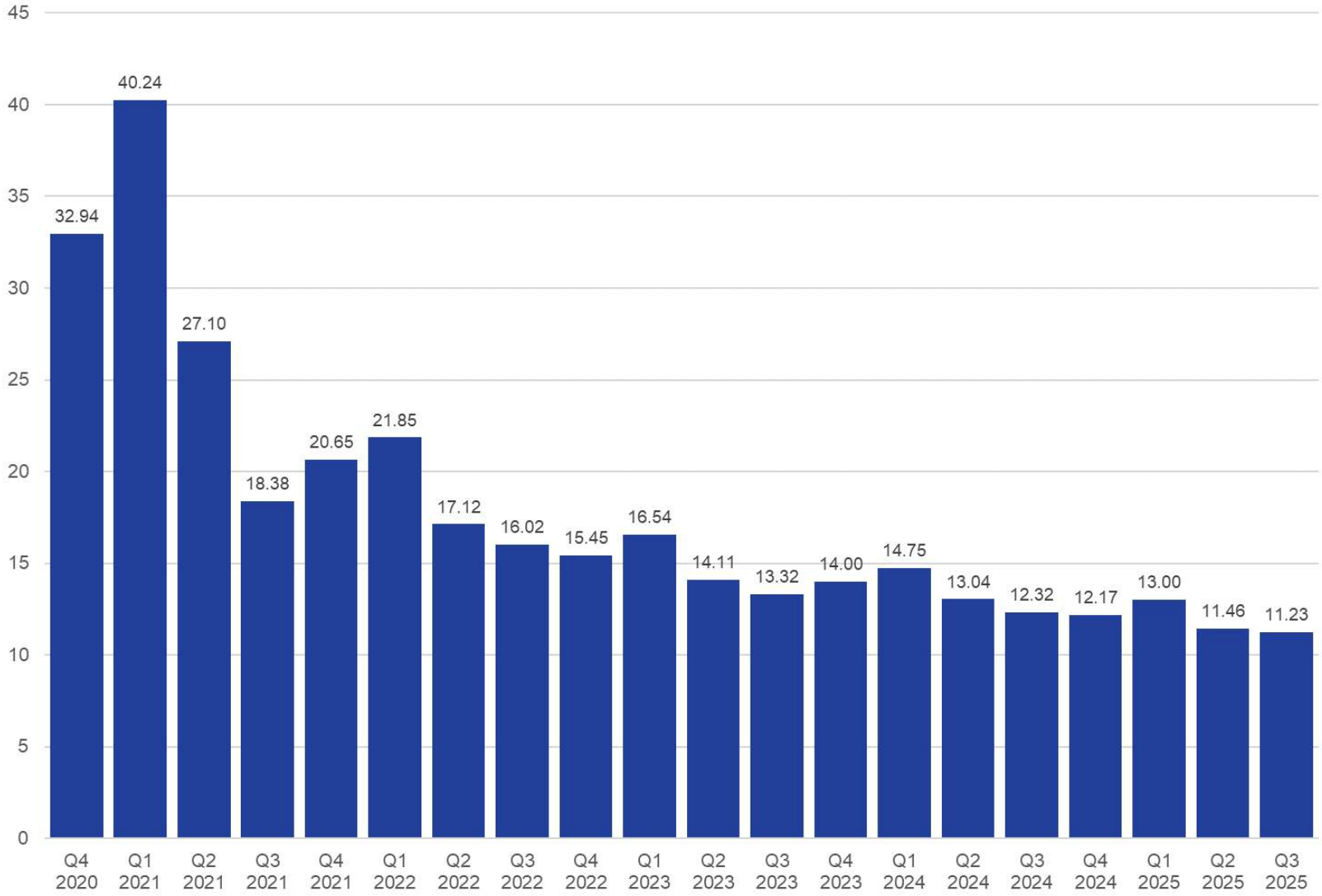


Figure 16 depicts the EEA average number of roaming minutes per subscriber. This average is calculated by dividing the number of roaming minutes per quarter by the total number of roaming subscribers and again by three to arrive at monthly values for Q4 2020 – Q3 2025.

Figure 16: EEA roaming calls made, (millions of minutes), Q4 2020 – Q3 2025

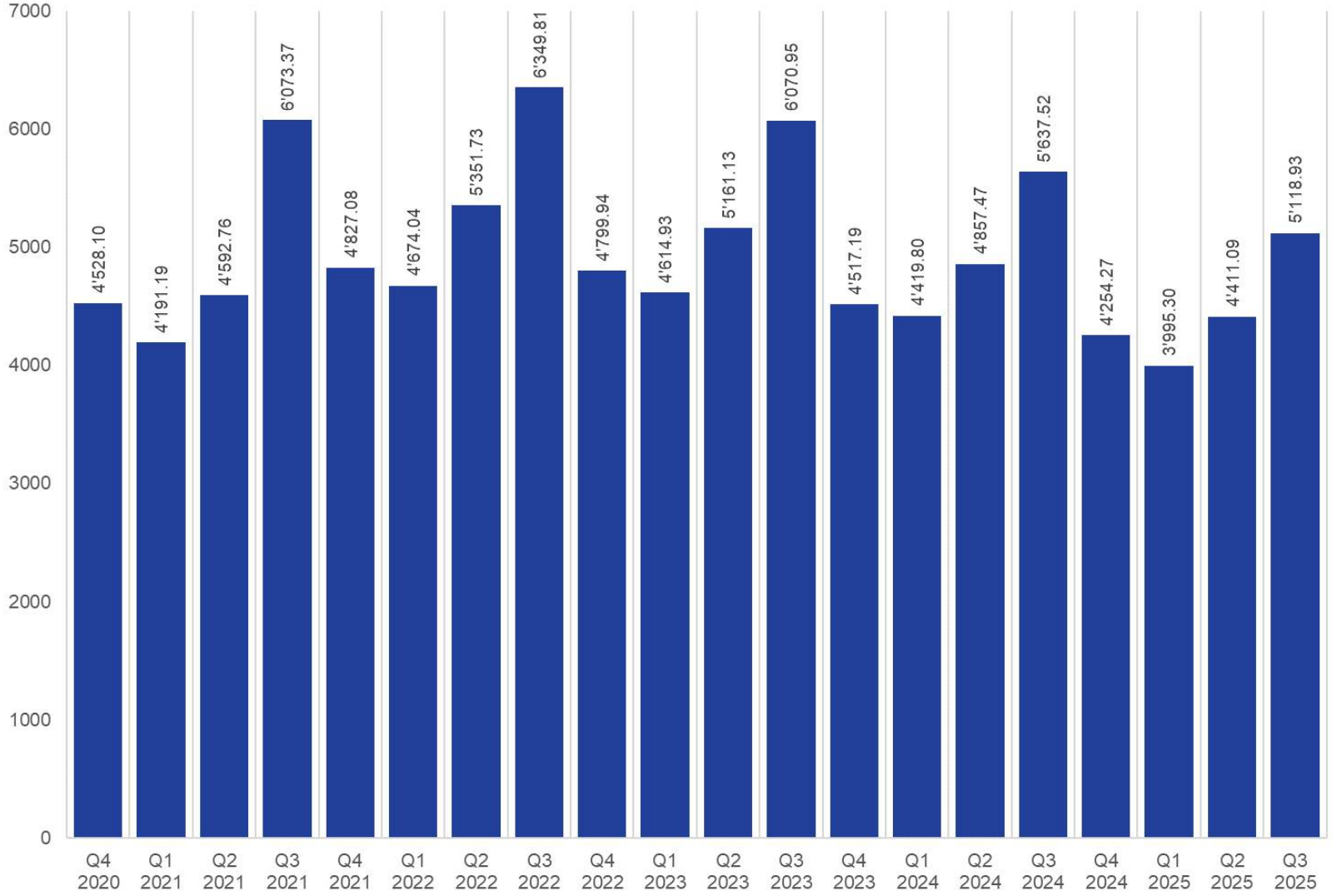


Figure 17 depicts the total number of minutes (calls made) while roaming (including RLAH, RLAH+ stable link, RLAH+ derogation, RLAH+ abusive/anomalous usage, alternative tariffs) in the EEA for Q4 2020 – Q3 2025 (in millions of minutes).

Figure 17: EEA roaming calls received, (millions of minutes), Q4 2020 – Q3 2025

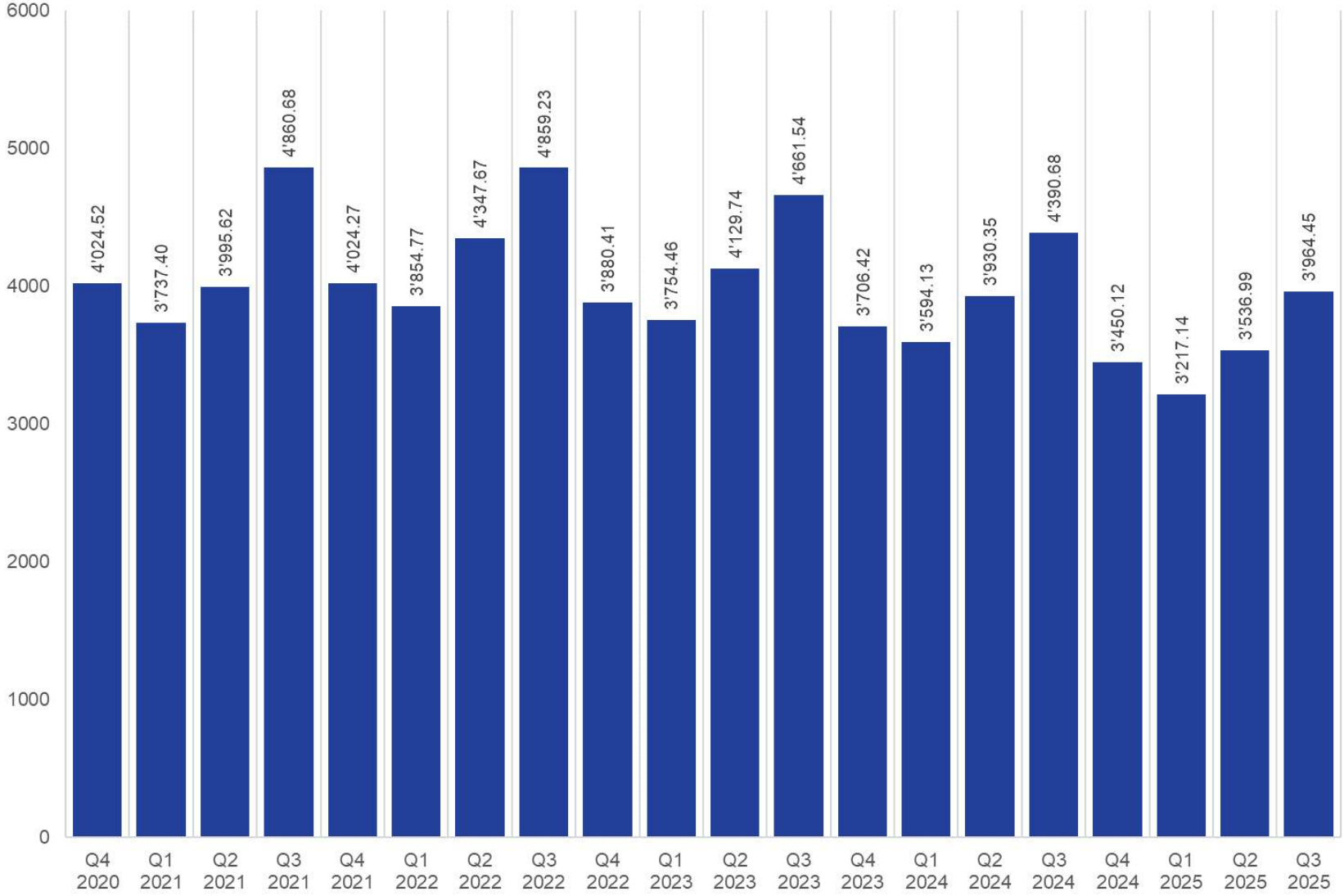


Figure 18 depicts the total number of minutes (calls received) while roaming (including RLAH, RLAH+ stable link, RLAH+ derogation, RLAH+ abusive/anomalous usage, alternative tariffs) in the EEA for Q4 2020 – Q3 2025 (in millions of minutes).

5.2.2. SMS roaming services

5.2.2.1 Wholesale rates

Figure 18: EEA average wholesale rates per roaming SMS, Q4 2020 – Q3 2025 (balanced, unbalanced, total and RoW traffic, and non-terrestrial networks)

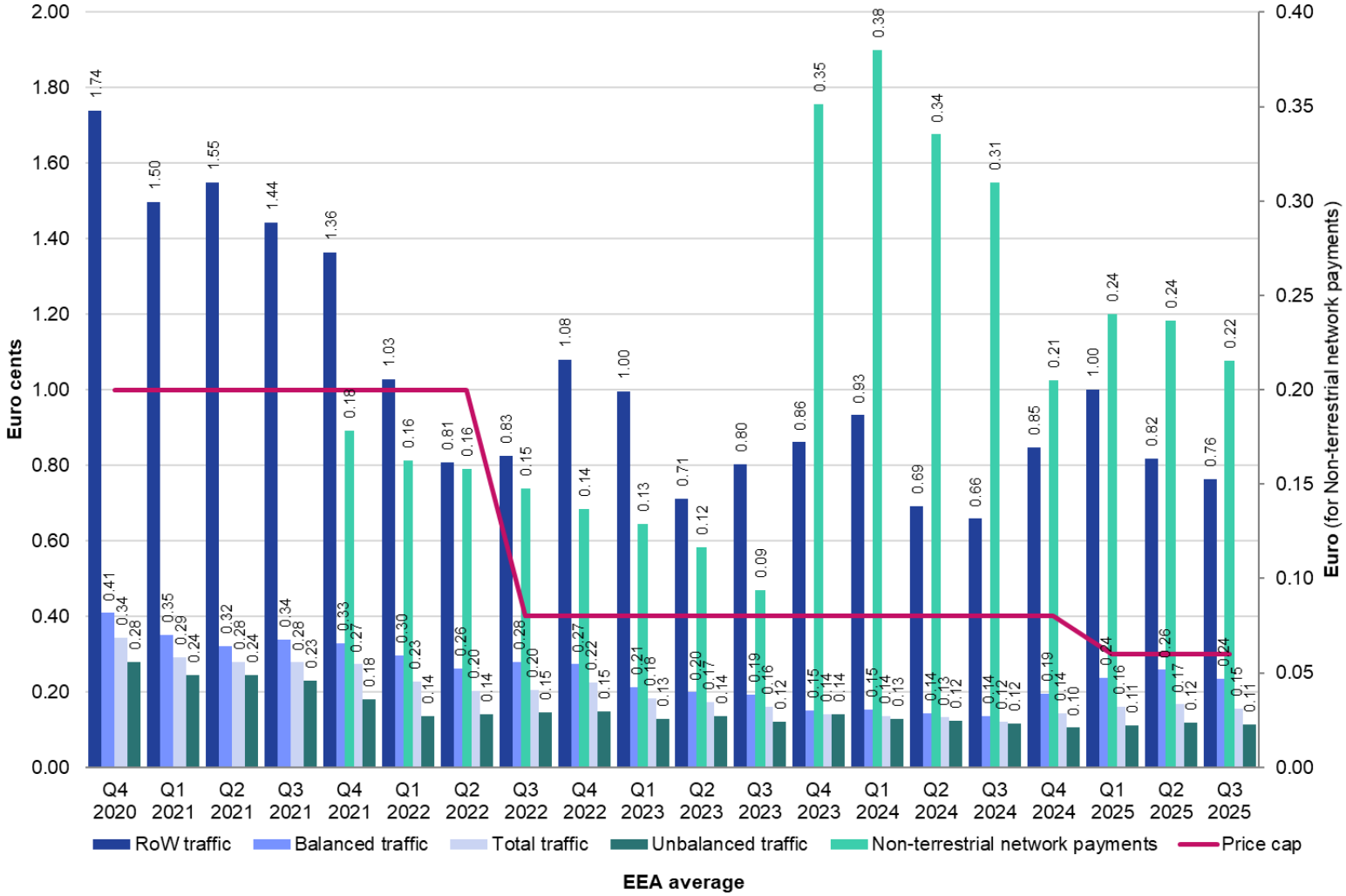


Figure 19 depicts EEA average wholesale rates per SMS for intra-EEA (balanced, unbalanced, and total), RoW and non-terrestrial network traffic, as well as the wholesale price cap applied. The average was calculated by dividing the wholesale revenues for SMS by the number of SMS in the respective category.
Please note that most MNOs report total data, while only some report balanced and unbalanced data.

5.2.3. Data roaming services

5.2.3.1 Wholesale rates

Figure 19: EEA average: wholesale roaming rates per GB (balanced and unbalanced traffic), Q4 2020 – Q3 2025

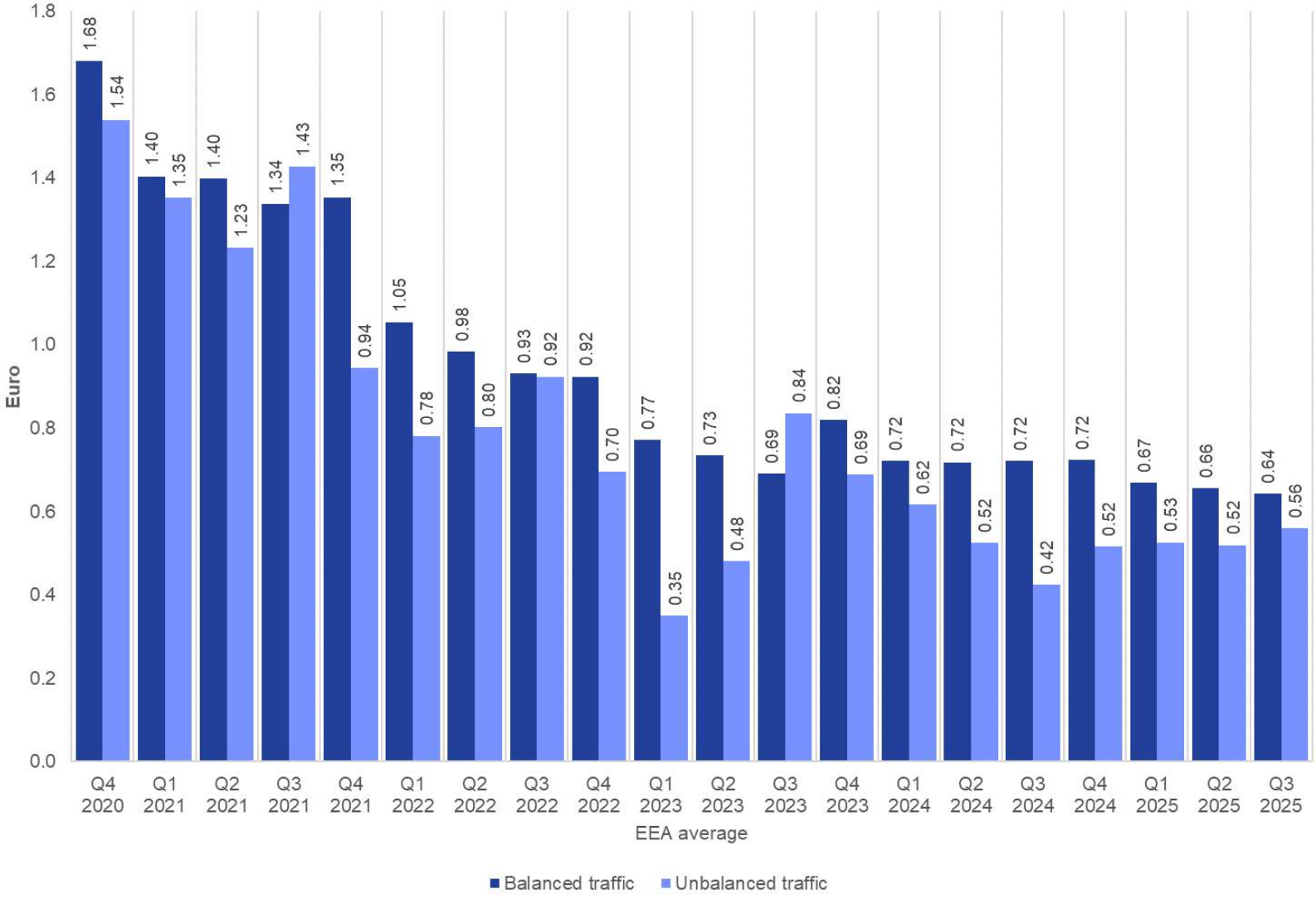


Figure 20 depicts the average wholesale rates per roaming GB for balanced and unbalanced traffic at EEA level for Q4 2020 – Q3 2025. This average is calculated, respectively, by dividing the wholesale revenues by the number of roaming GB in each traffic category.
Please note that most MNOs report total data, while only some report balanced and unbalanced data.

Figure 20: EEA average: average wholesale roaming data rates per GB (total traffic), Q4 2020 – Q3 2025

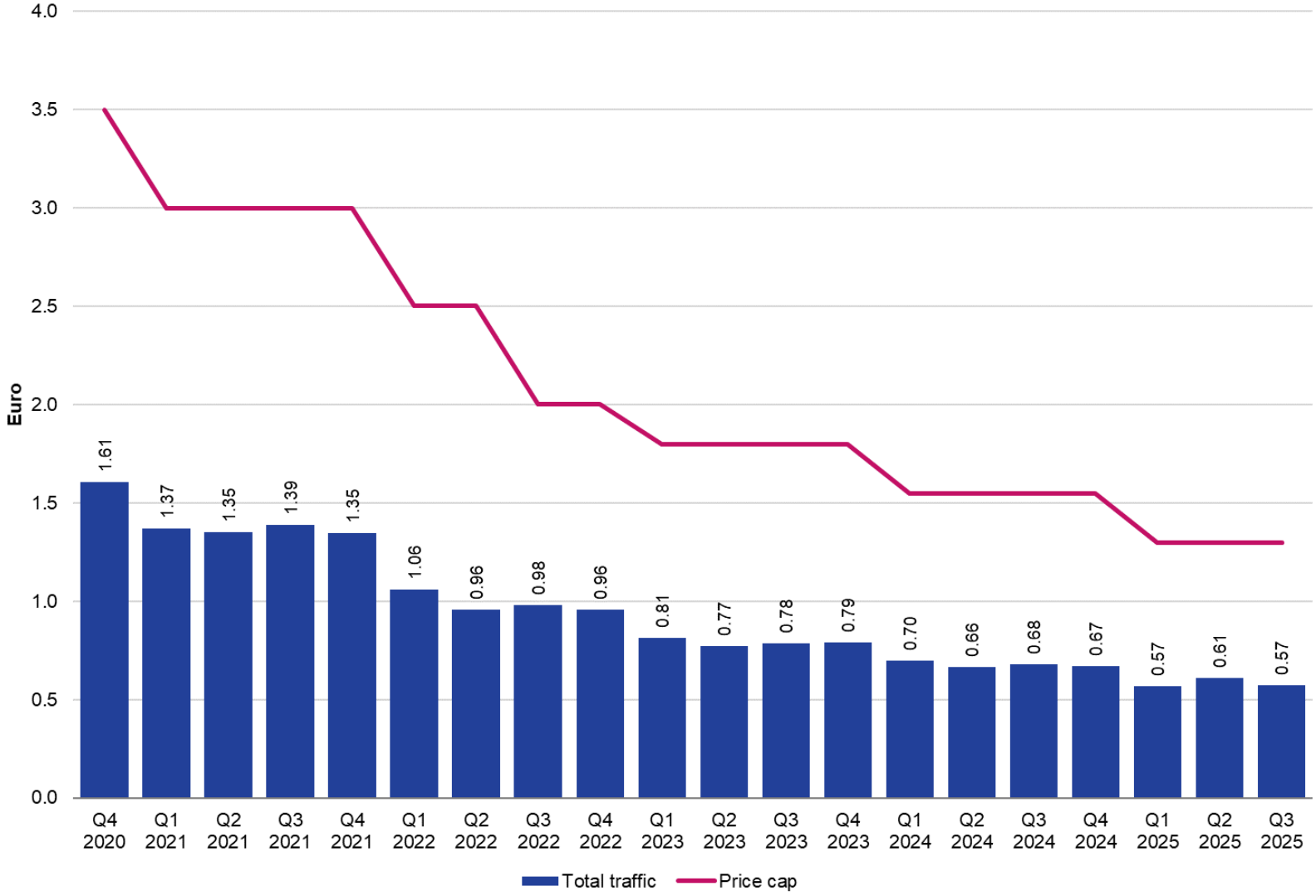


Figure 21 depicts the average wholesale rates for roaming GB of total traffic at EEA level and compares these to the wholesale price caps applied in Q4 2020 – Q3 2025. The average wholesale rates for total traffic are calculated by dividing the wholesale revenues in this category by the number of roaming GB in this category.

Figure 21: EEA average wholesale data rates per GB, Q4 2020 – Q3 2025 (balanced, unbalanced, total and RoW traffic and non-terrestrial networks)

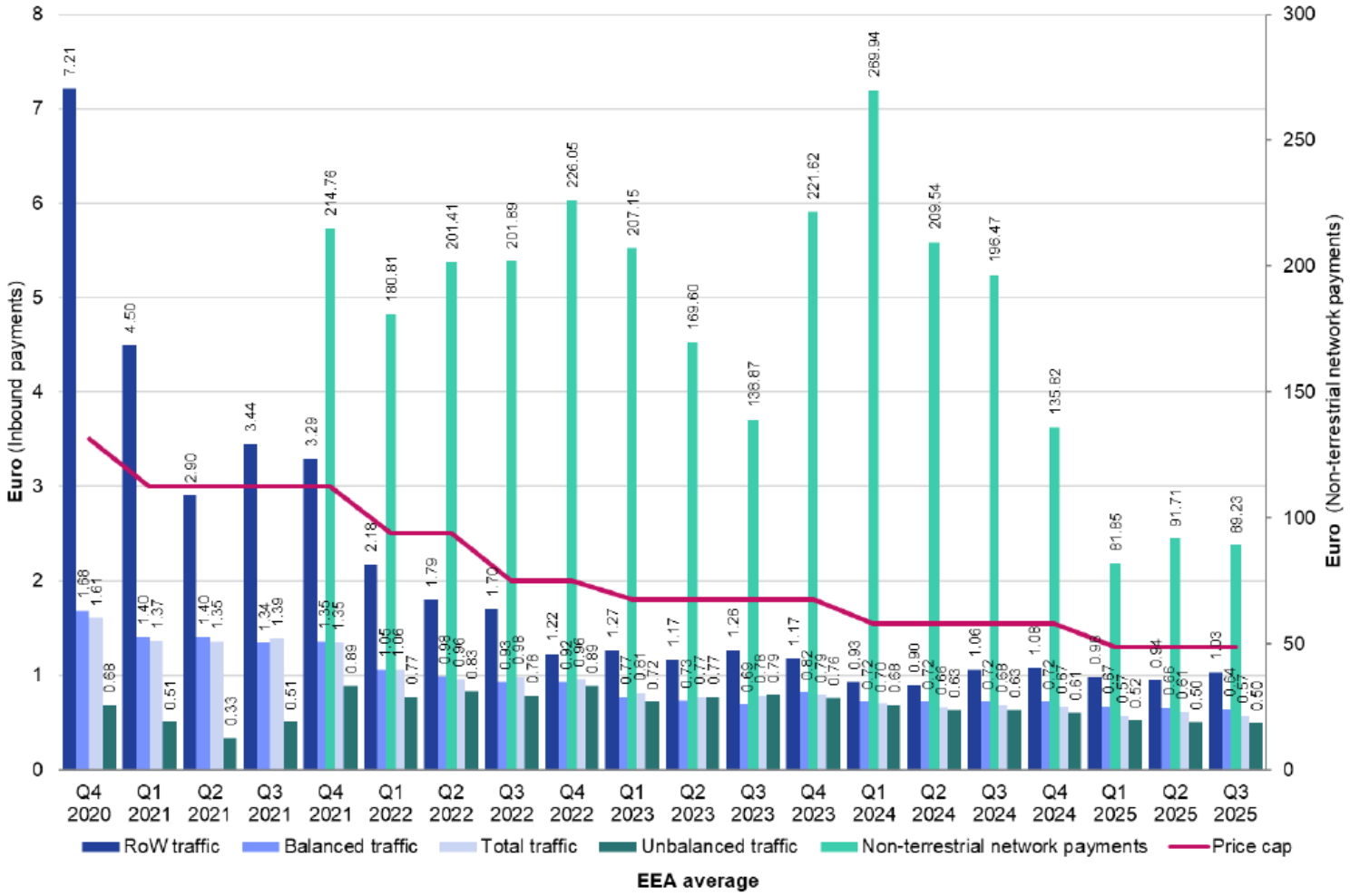


Figure 22 depicts EEA average wholesale rates for data per GB for intra-EEA (balanced, unbalanced, and total), RoW and non-terrestrial network traffic, as well as the wholesale price cap applied. The average was calculated by dividing the wholesale revenues for GB by the number of GB in the respective category.
Non-terrestrial network payments are aligned to the secondary axis due to higher number differences with other services fees.
Please note that most MNOs report total data, while only some report balanced and unbalanced data.

Figure 22: Proportion of balanced and unbalanced traffic within EEA countries, data services, wholesale roaming inbound, Q3 2025

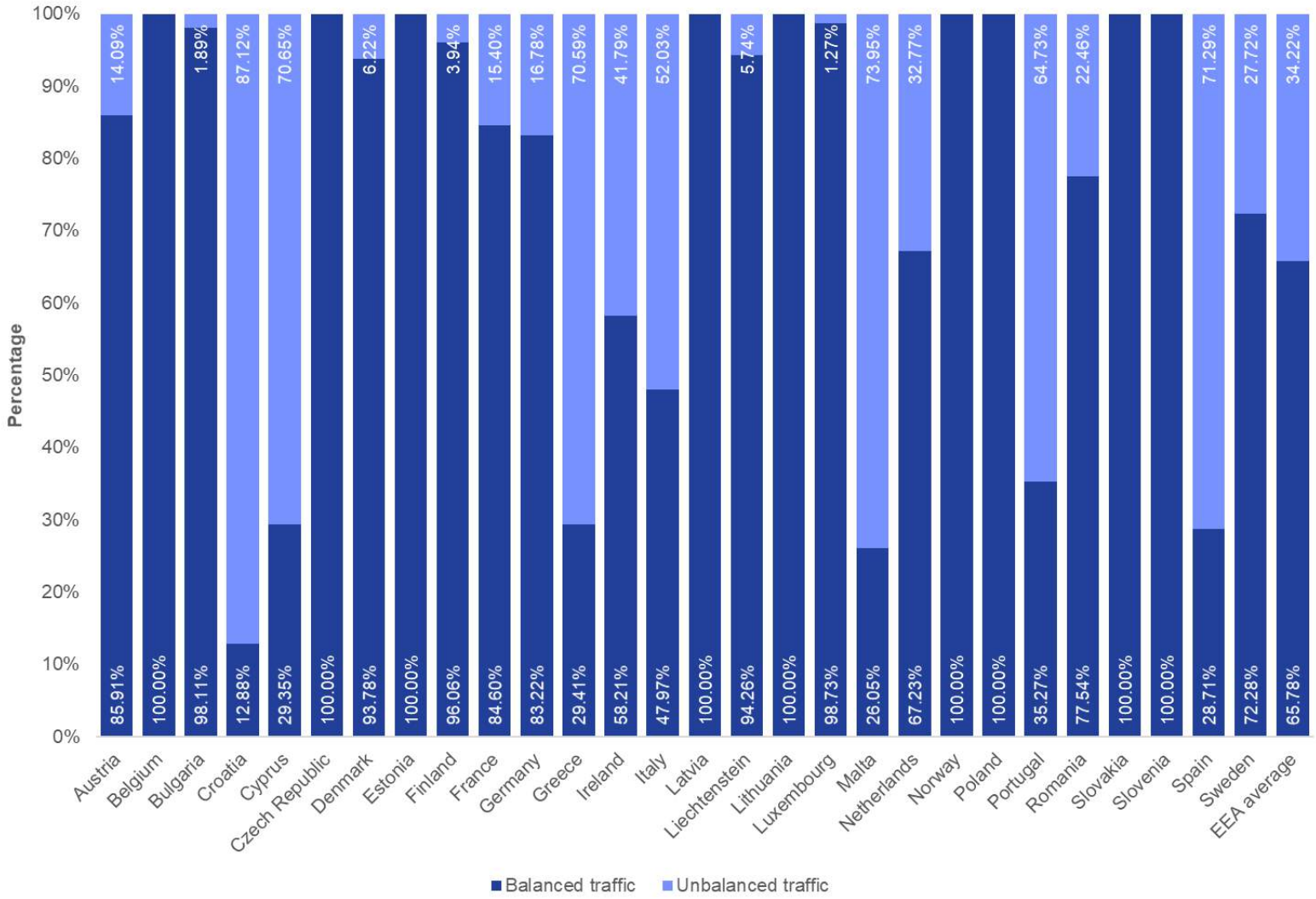


Figure 23 depicts the share of balanced and unbalanced traffic within EEA countries used for inbound data services for Q3 2025. This value is created by calculating the contribution of the number of balanced and unbalanced GB to the total number of wholesale roaming GB.
Please note that most MNOs report total data, while only some report balanced and unbalanced data.

5.2.3.2 Consumption patterns

Figure 23: EEA average: retail data roaming services by share of tariff, Q4 2020 – Q3 2025

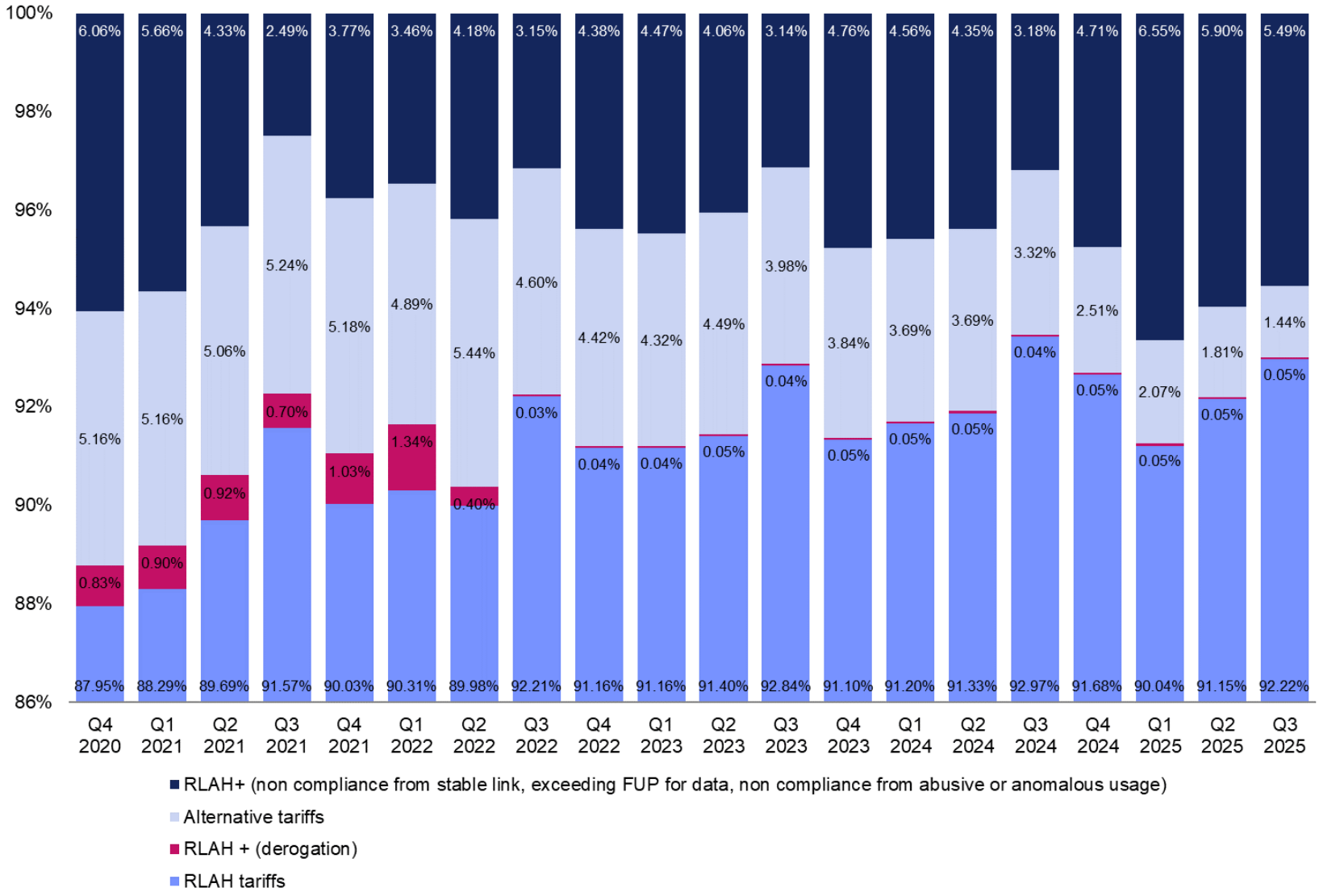


Figure 24 depicts the EEA average of the share of tariffs (RLAH tariffs, RLAH+ (derogation), RLAH+ (stable link, abusive/anomalous usage), Alternative tariffs) used for roaming data services for Q4 2020 – Q3 2025. This average is created by calculating the contribution of each tariff to the total number of roaming data services.

Figure 24: Average data consumption per month per roaming subscriber (in GB), Q3 2024 and Q3 2025

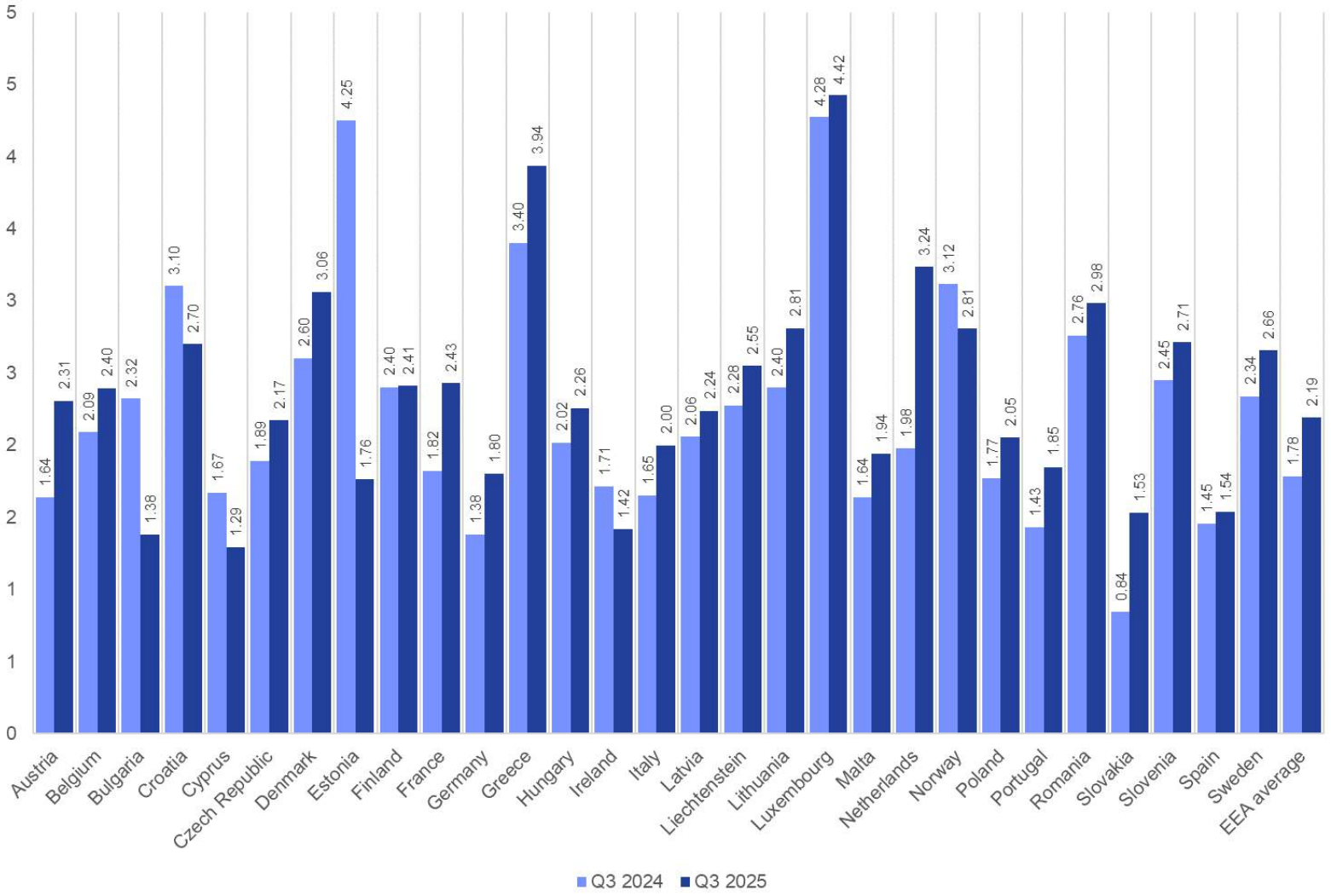


Figure 25 depicts the average number of roaming GB consumed per subscriber on a per-country level. This average is calculated by dividing the number of roaming GB by the total number of roaming subscribers and again by three to arrive at monthly values for Q3 2024 and Q3 2025.
In some cases, not all operators provided the data for RLAH subscribers.

Figure 25: EEA average: data consumption per month per roaming subscriber (in GB), Q4 2020 – Q3 2025

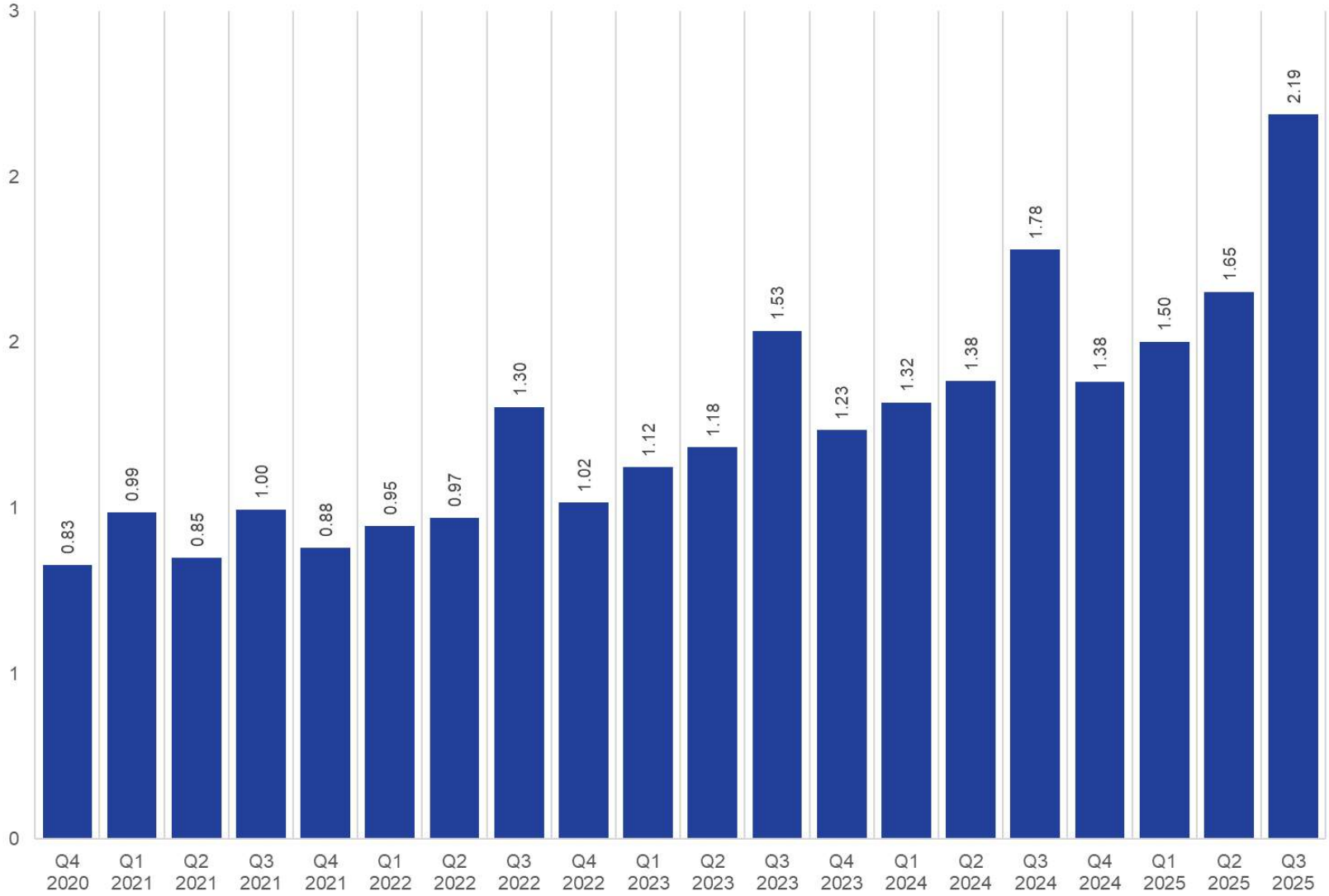


Figure 26 depicts the EEA average number of roaming GB consumed per subscriber. This average is calculated by dividing the number of roaming GB by the total number of roaming subscribers and again by three to arrive at monthly values for Q4 2020 – Q3 2025

Figure 26: EEA retail data, Q4 2020 – Q3 2025 (millions of GB)

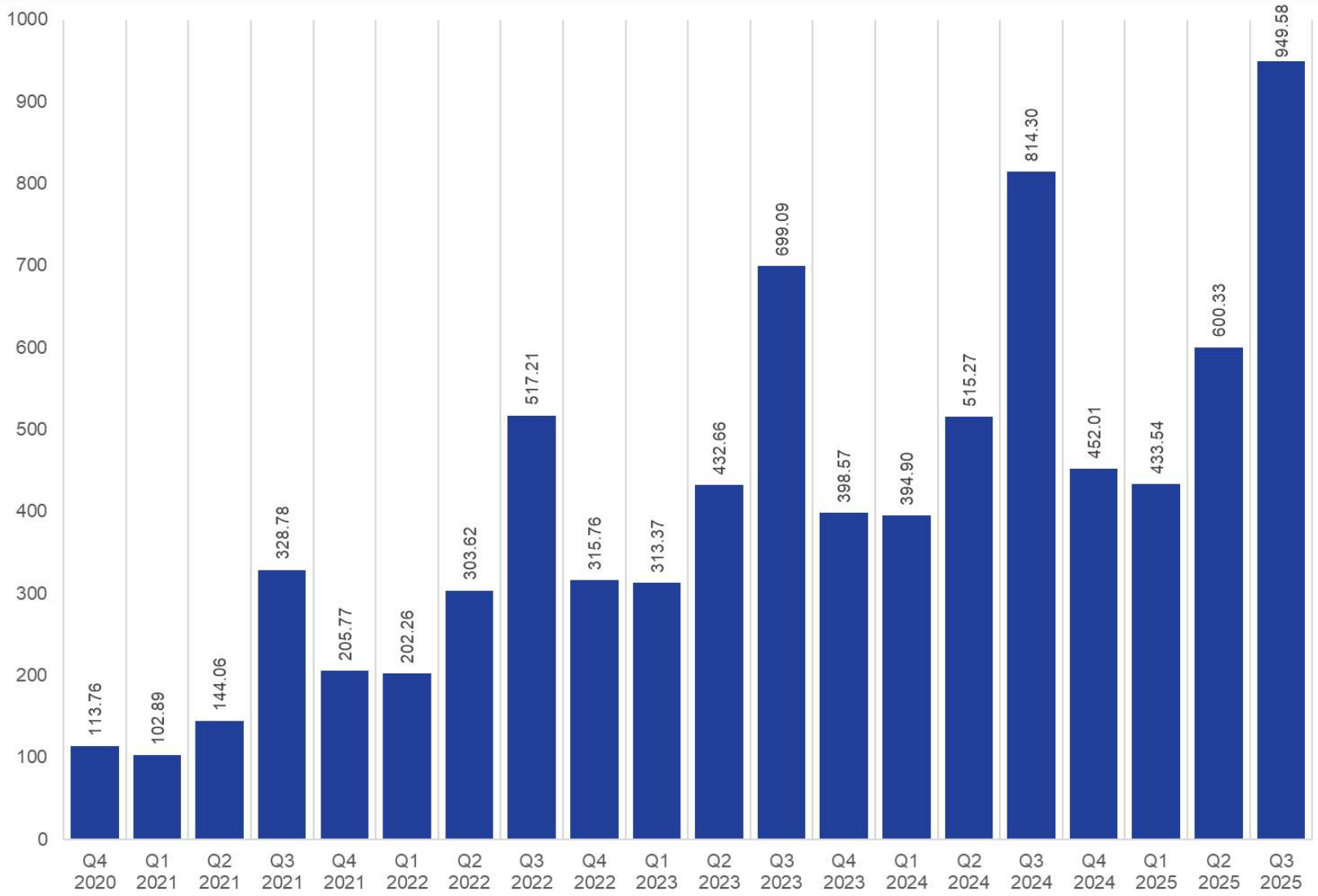


Figure 27 depicts the total number of GB while roaming (including RLAH, RLAH+ stable link, RLAH+ derogation, RLAH+ abusive/anomalous usage, RLAH+ exceeding data FUP, alternative tariffs) in the EEA for Q4 2020 – Q3 2025 (in millions of GB).

5.2.4. RoW retail roaming prices

Figure 27: EEA average retail prices for RoW roaming services, Q4 2020 – Q3 2025

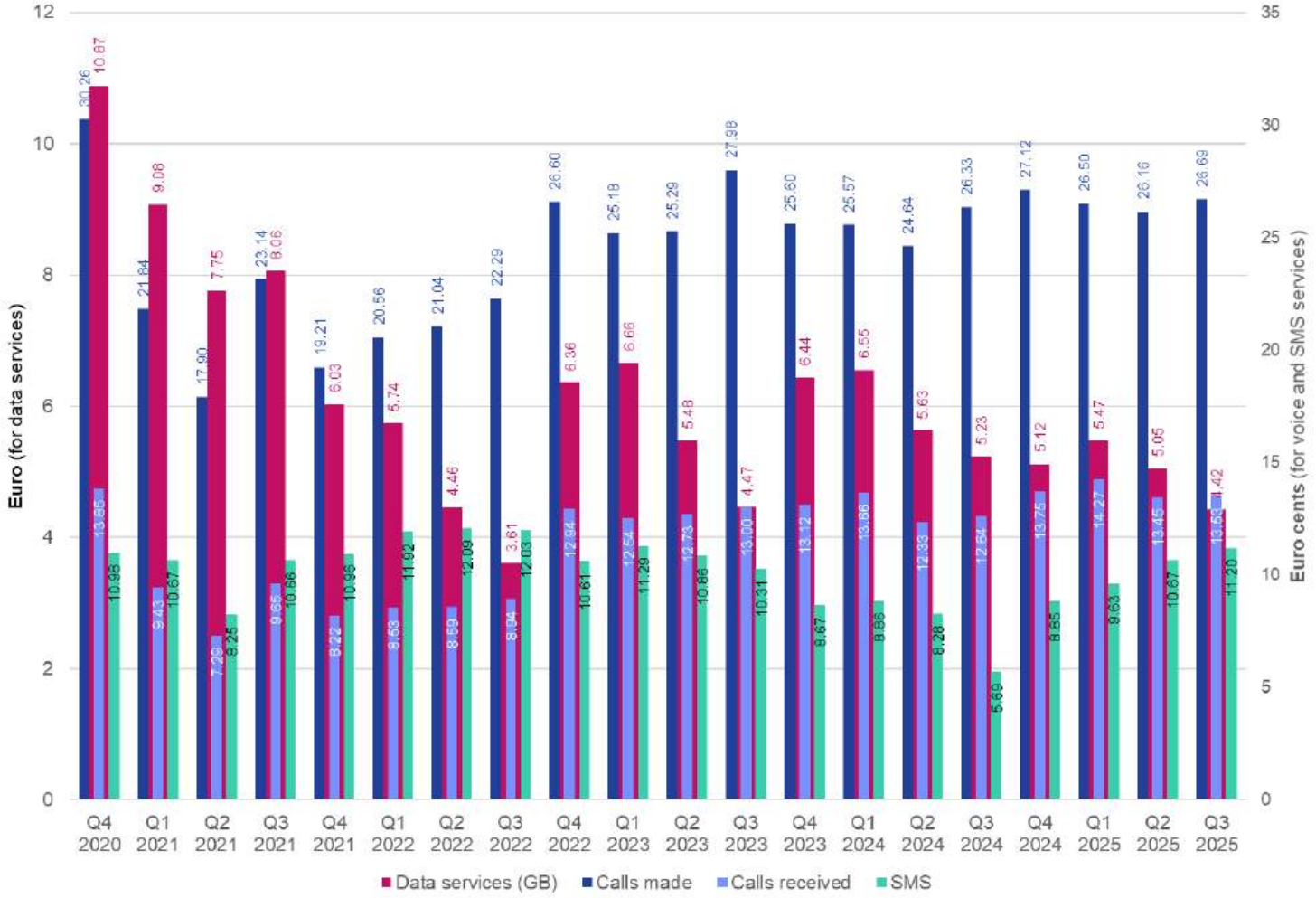


Figure 28 compares the average retail prices in RoW countries for EEA roaming subscribers. To calculate these averages, the retail roaming revenues in RoW countries were divided by the volumes of retail roaming traffic initiated by EEA roaming subscribers in RoW countries (calls made, calls received, SMS and data services) for Q4 2020 – Q3 2025.
Voice and SMS services: prices are expressed in EUR cents. Data services: prices are expressed in EUR.
Spain excluded.

Figure 28: EEA average retail prices for roaming on non-terrestrial networks, Q4 2021 – Q3 2025

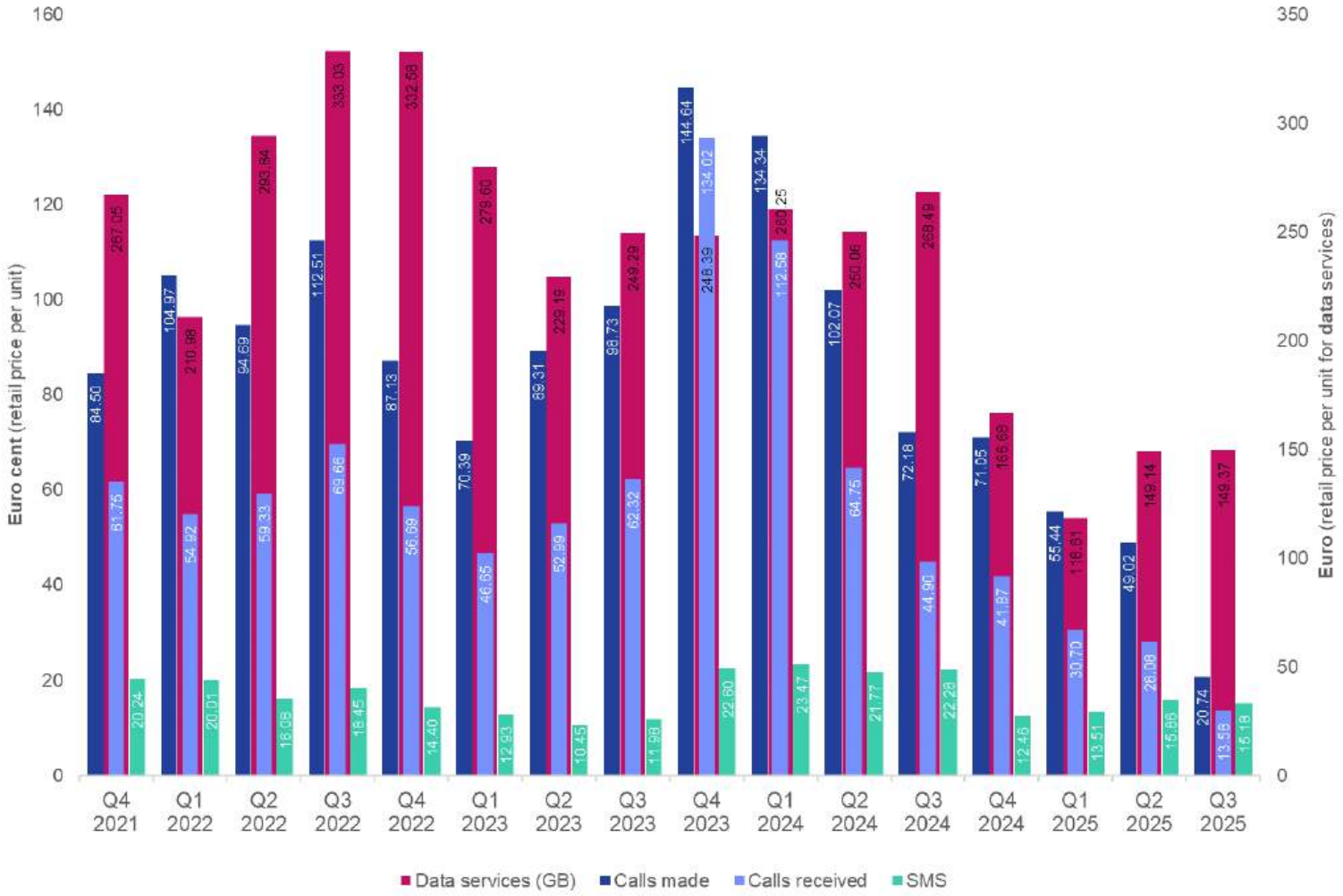


Figure 29 depicts the EEA average retail prices for roaming on non-terrestrial networks. The average was calculated by dividing the retail roaming revenues on non-terrestrial networks by the retail roaming volumes on non-terrestrial networks (separately for calls made, calls received, SMS and data services) for Q4 2021 – Q3 2025.

Data services for non-terrestrial network payments are aligned to the secondary axis due to higher number differences with other services fees. The rest of the services are aligned to primary axis.

5.3. Wholesale roaming (outbound) rates per unit for agreements applying Art. 3 Roaming Regulation

Figure 29: Wholesale averages outbound roaming: rate per minute for agreements applying Article 3 Roaming Regulation, Q4 2020 – Q3 2025

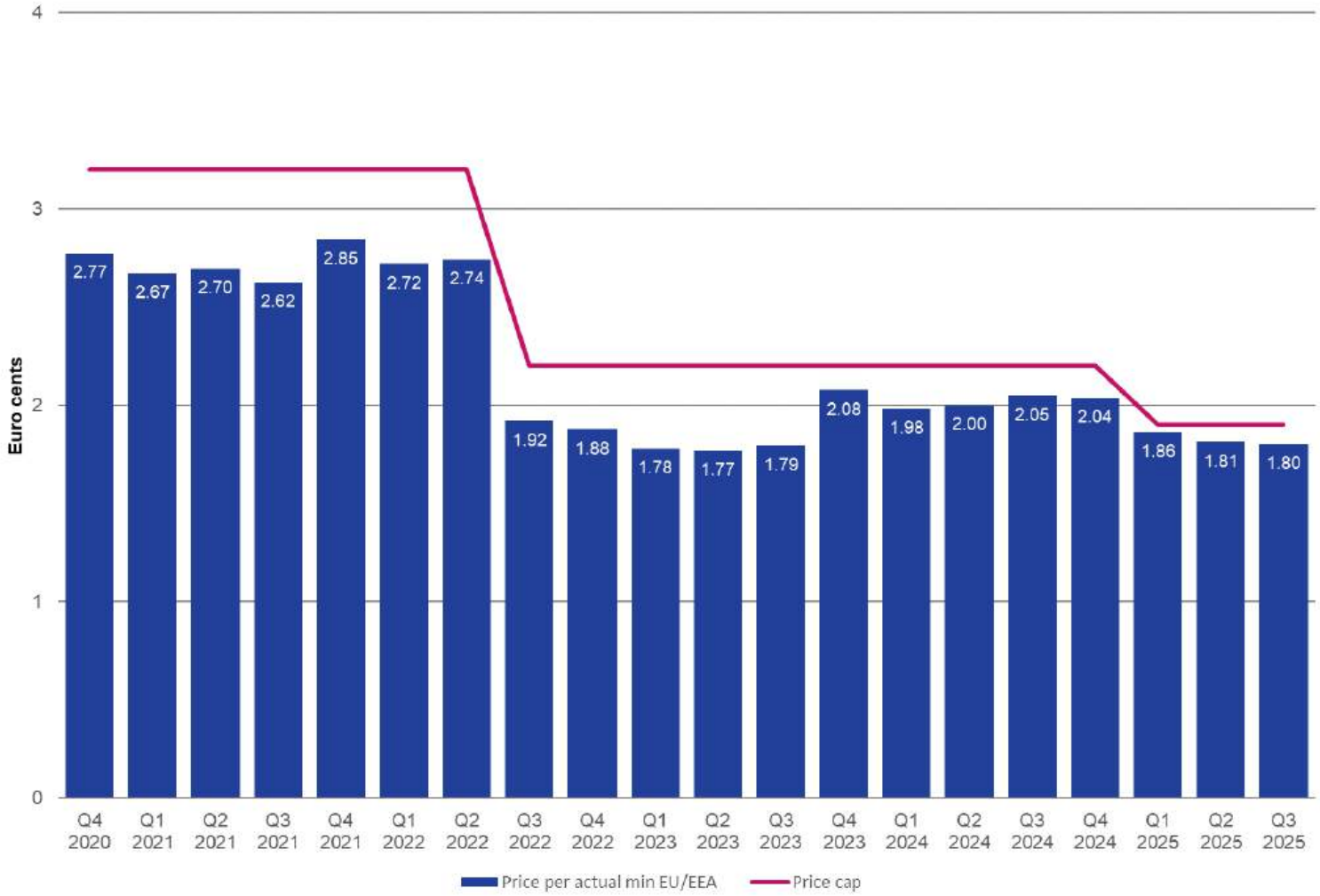


Figure 30 depicts the rate per minute for wholesale outbound resale roaming in the EEA for agreements applying Article 3 of Roaming Regulation and compares it to the wholesale price caps applied. This average is calculated by dividing the wholesale roaming revenues by the number of minutes for Q4 2020 – Q3 2025.

Figure 30: Wholesale averages outbound roaming: rate per SMS for agreements applying Article 3 Roaming Regulation, Q4 2020 – Q3 2025

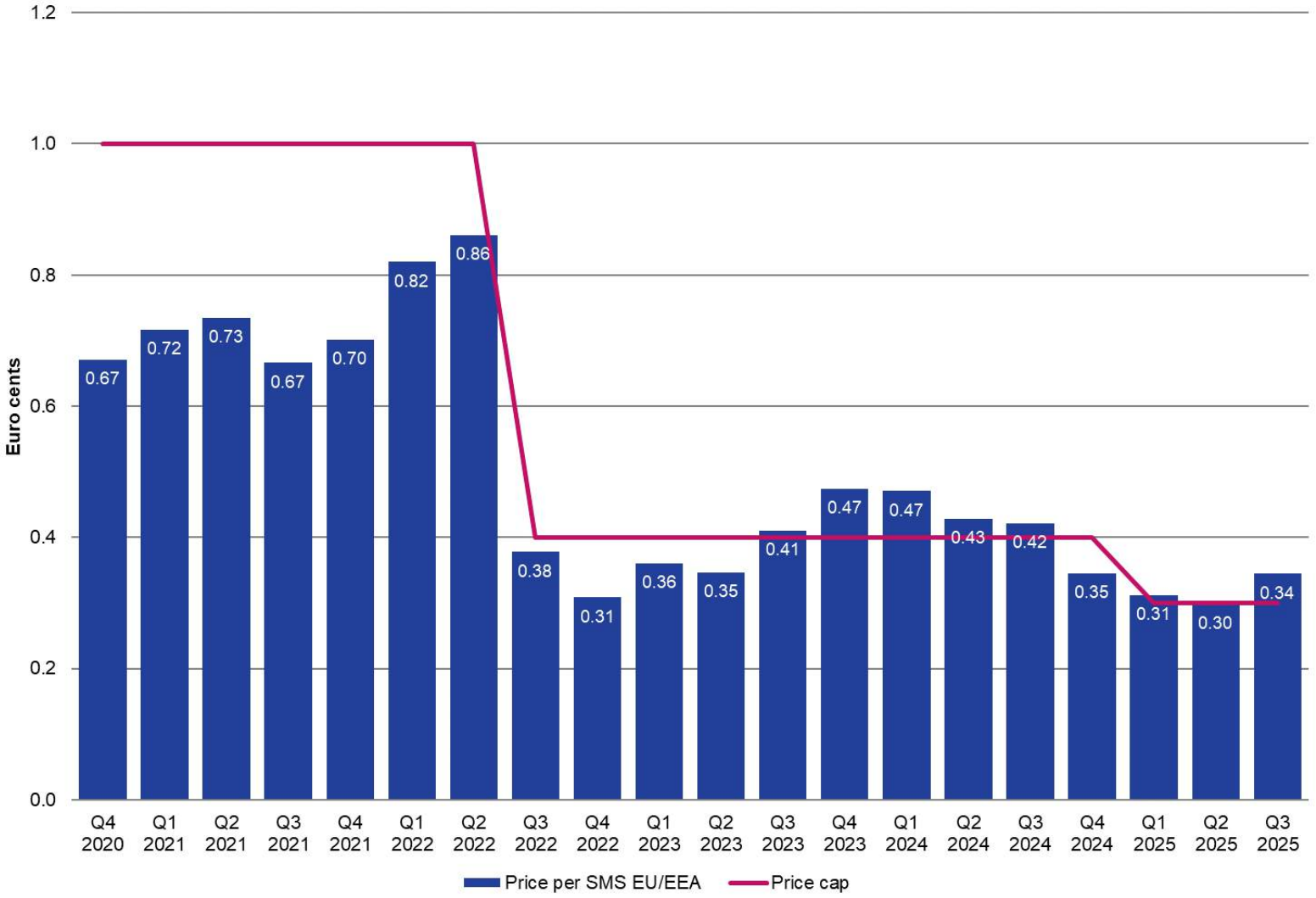


Figure 31 depicts the rate per SMS for wholesale outbound resale roaming in the EEA for agreements applying Article 3 of Roaming Regulation and compares it to the wholesale price caps applied. This average is calculated by dividing the wholesale roaming revenues by the number of SMS for Q4 2020 – Q3 2025.

Figure 31: Wholesale EEA average outbound roaming: rate per GB for agreements applying Article 3 Roaming Regulation, Q4 2020 – Q3 2025

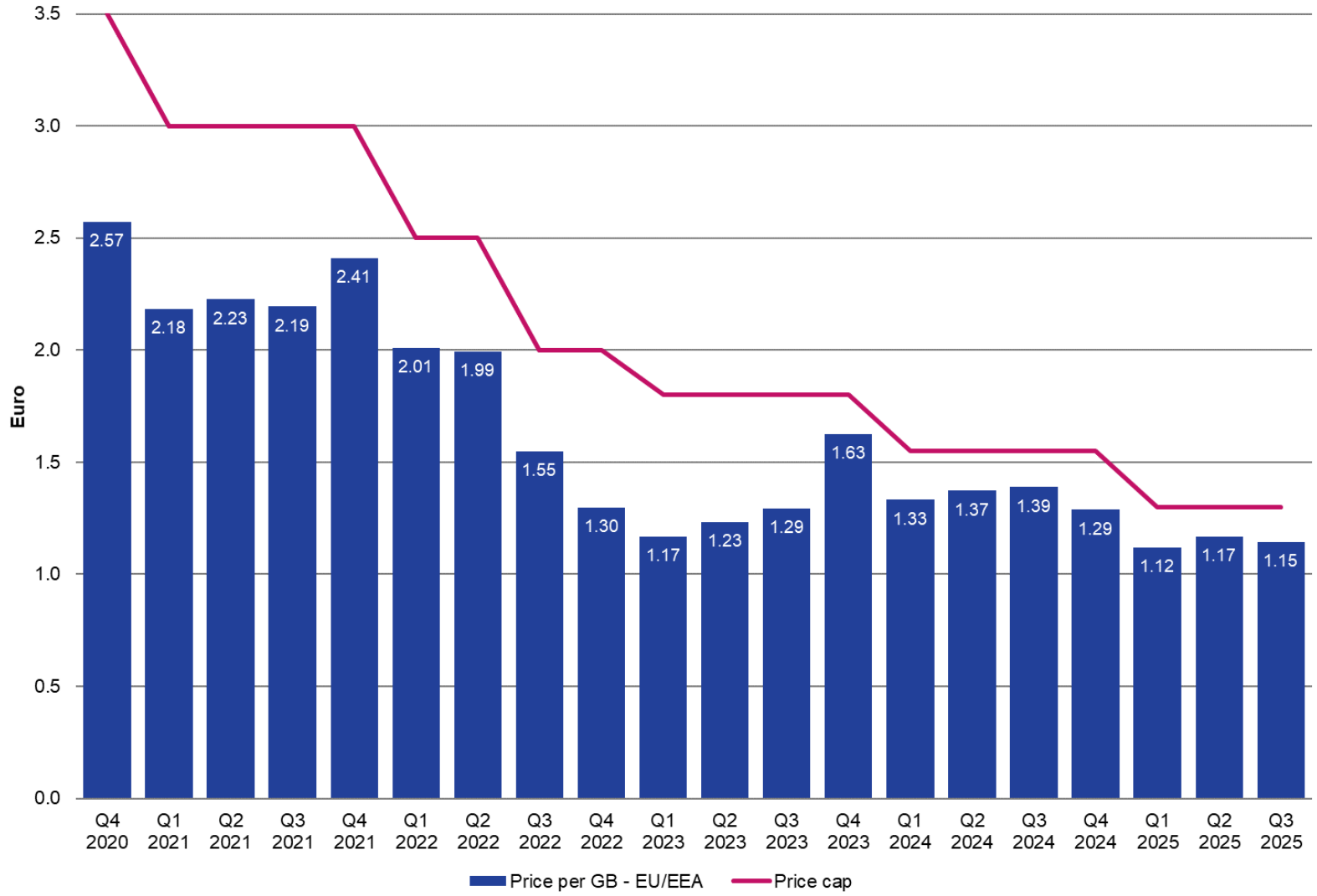


Figure 32 depicts the rate per GB for wholesale outbound resale roaming in the EEA for agreements applying Article 3 of Roaming Regulation and compares it to the wholesale price caps applied. This average is calculated by dividing the wholesale roaming revenues by the number of GB for Q4 2020 – Q3 2025.

Figure 32: Relation between wholesale costs and prices (min, SMS, GB), MNOs and MVNOs, Q4 2024 - Q3 2025

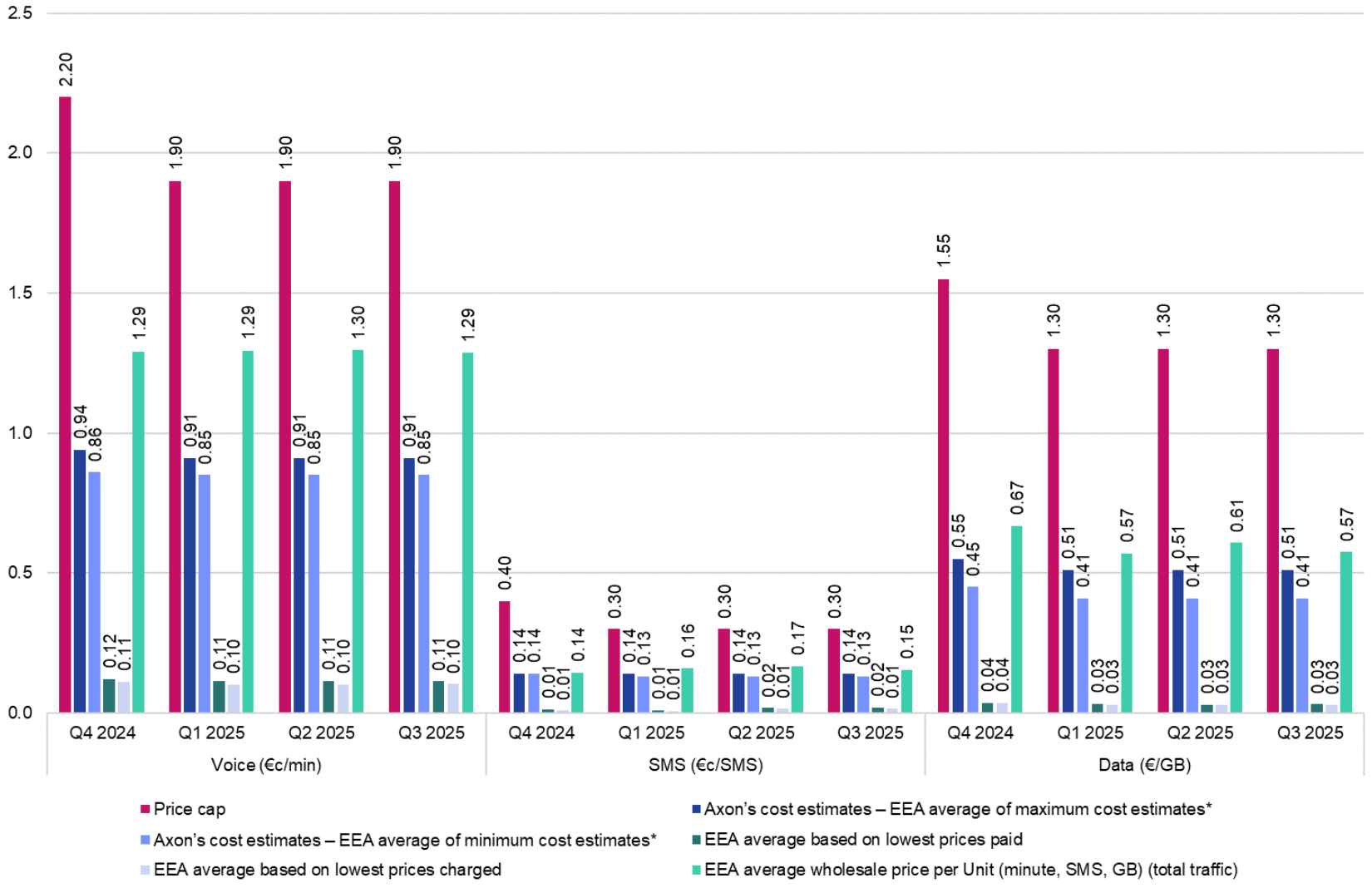


Figure 32 compares average EEA wholesale rates (based on lowest prices paid, lowest prices charged, and wholesale total traffic), Axon's cost estimates and wholesale price caps applied, separately for outgoing calls, SMS and data, for Q4 2024 – Q3 2025.

5.4. MNOs and MVNOs data

5.4.1. Consumption patterns for domestic mobile retail services

Figure 33: Domestic data services, average consumption per month per subscriber (GB), MNOs and MVNOs, Q3 2025

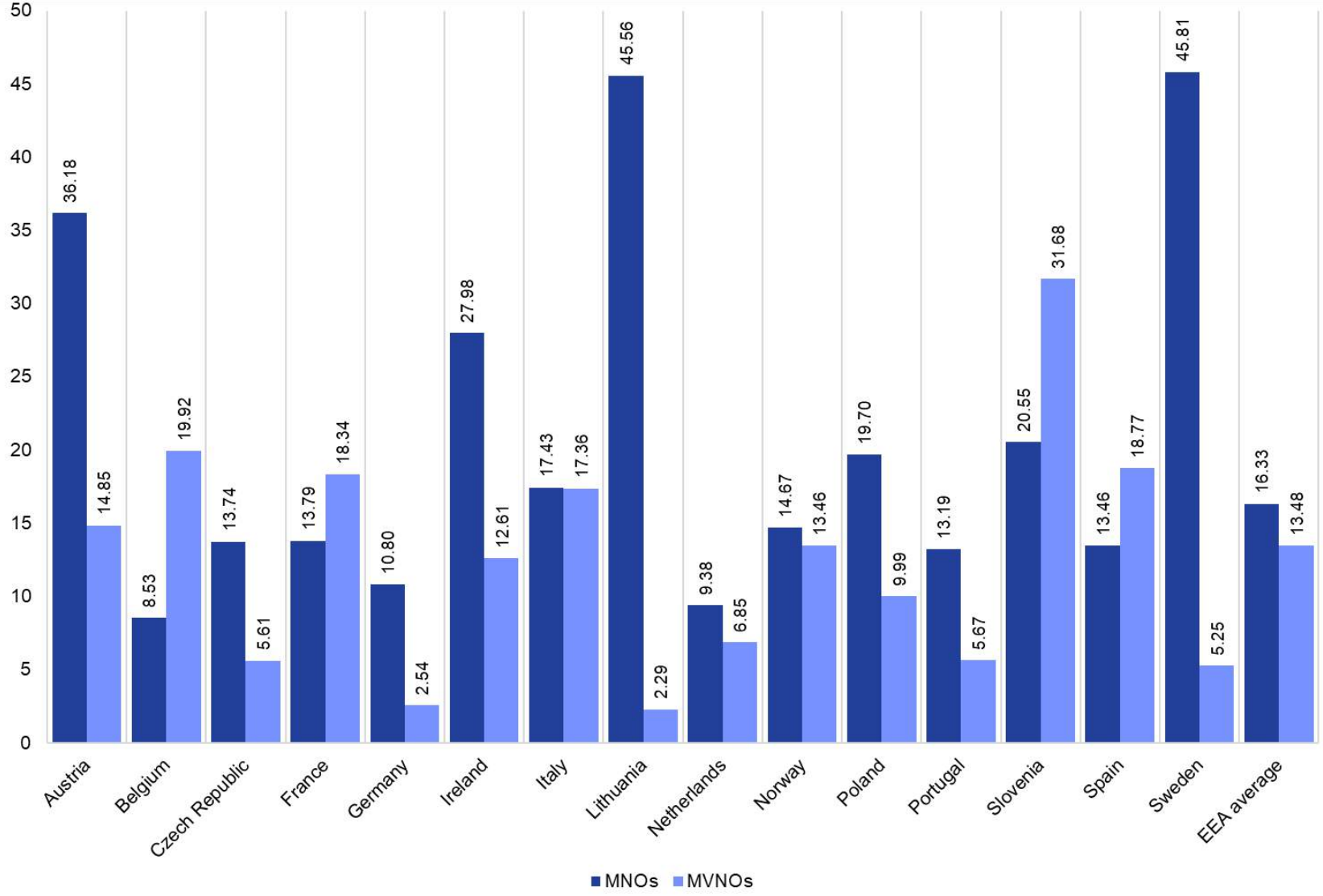


Figure 33 compares the average data consumption in each country (per month per subscriber) of subscribers to different types of roaming providers (MNOs vs MVNOs) for Q3 2025. Not all countries are represented in this figure, as MVNO data were available for 15 countries in Q3 2025.

Figure 34: EEA average domestic mobile services consumption per month per subscriber, Q4 2024 - Q3 2025

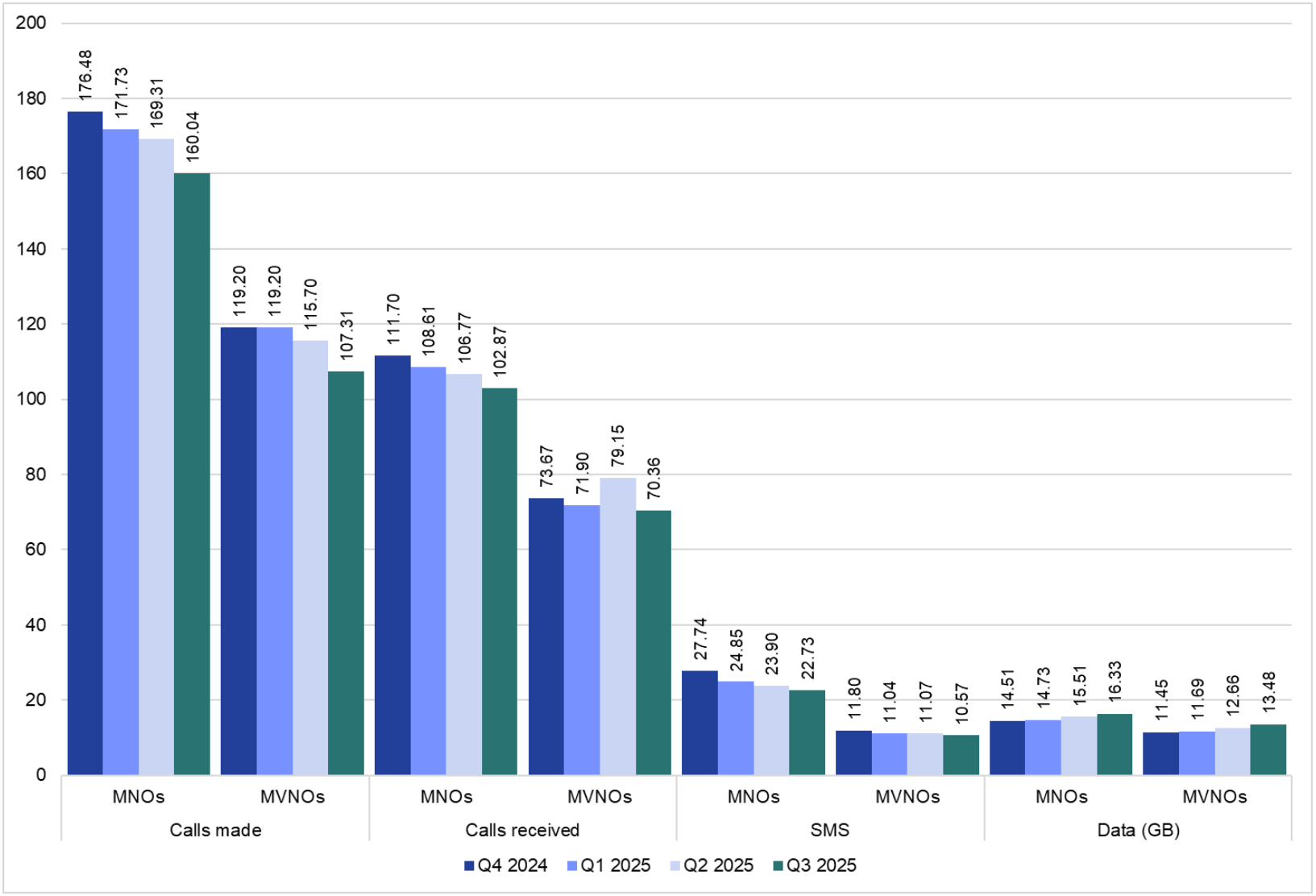


Figure 34 compares the EEA average consumption of mobile services (per month per subscriber) of subscribers to different types of roaming providers (MNOs vs MVNOs) Q4 2024 - Q3 2025.

Figure 35: MNOs: share of total subscribers with EU/EEA roaming enabled, Q4 2020 - Q3 2025

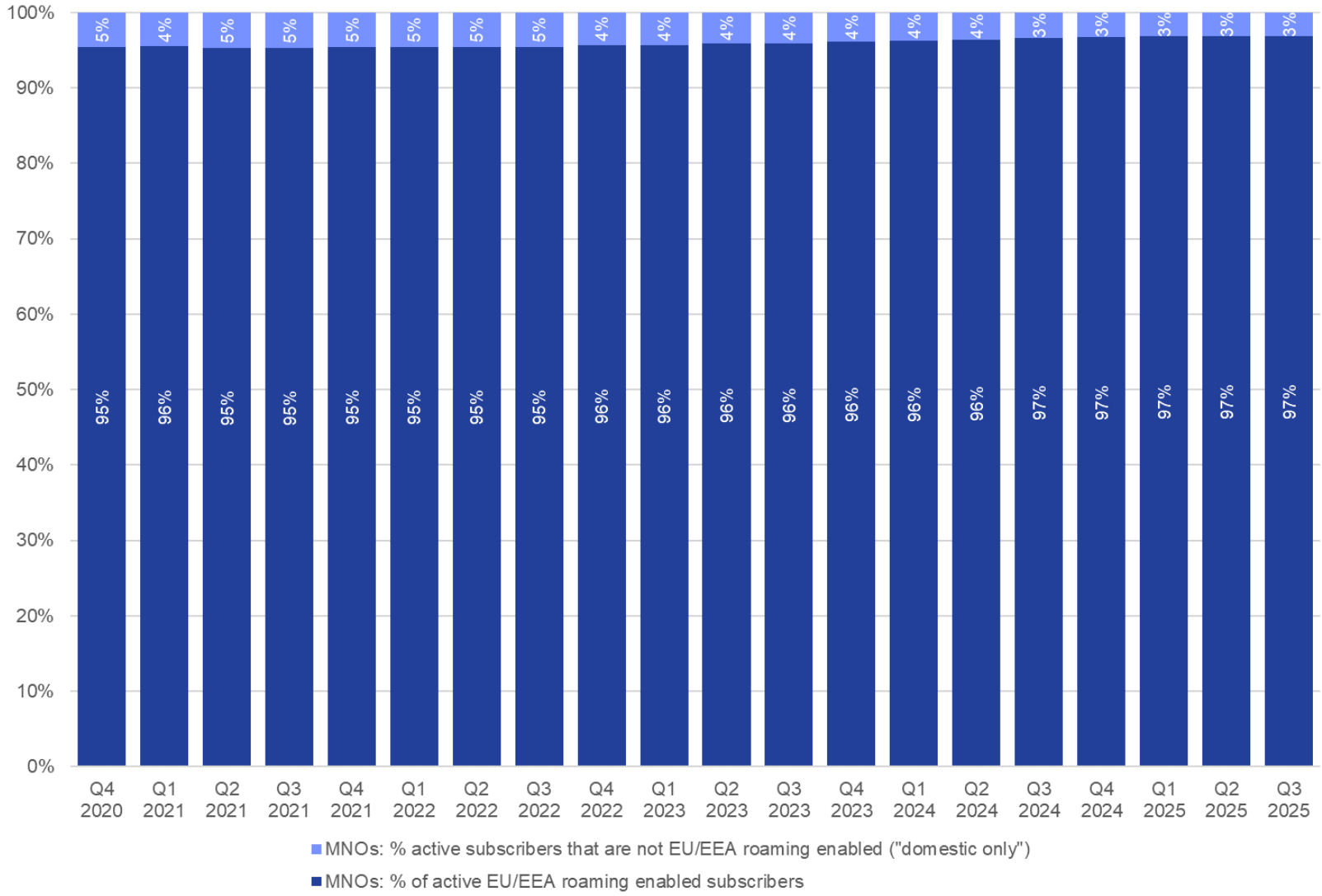


Figure 35 depicts the average share of total subscribers from MNOs only at EEA level, which compares the percentage of active EU/EEA roaming enabled subscribers to the percentage of subscribers that are not EU/EEA roaming enabled (domestic only) for Q4 2020 - Q3 2025.

Figure 36: MVNOs: share of total subscribers with EU/EEA roaming enabled, Q4 2020 - Q3 2025

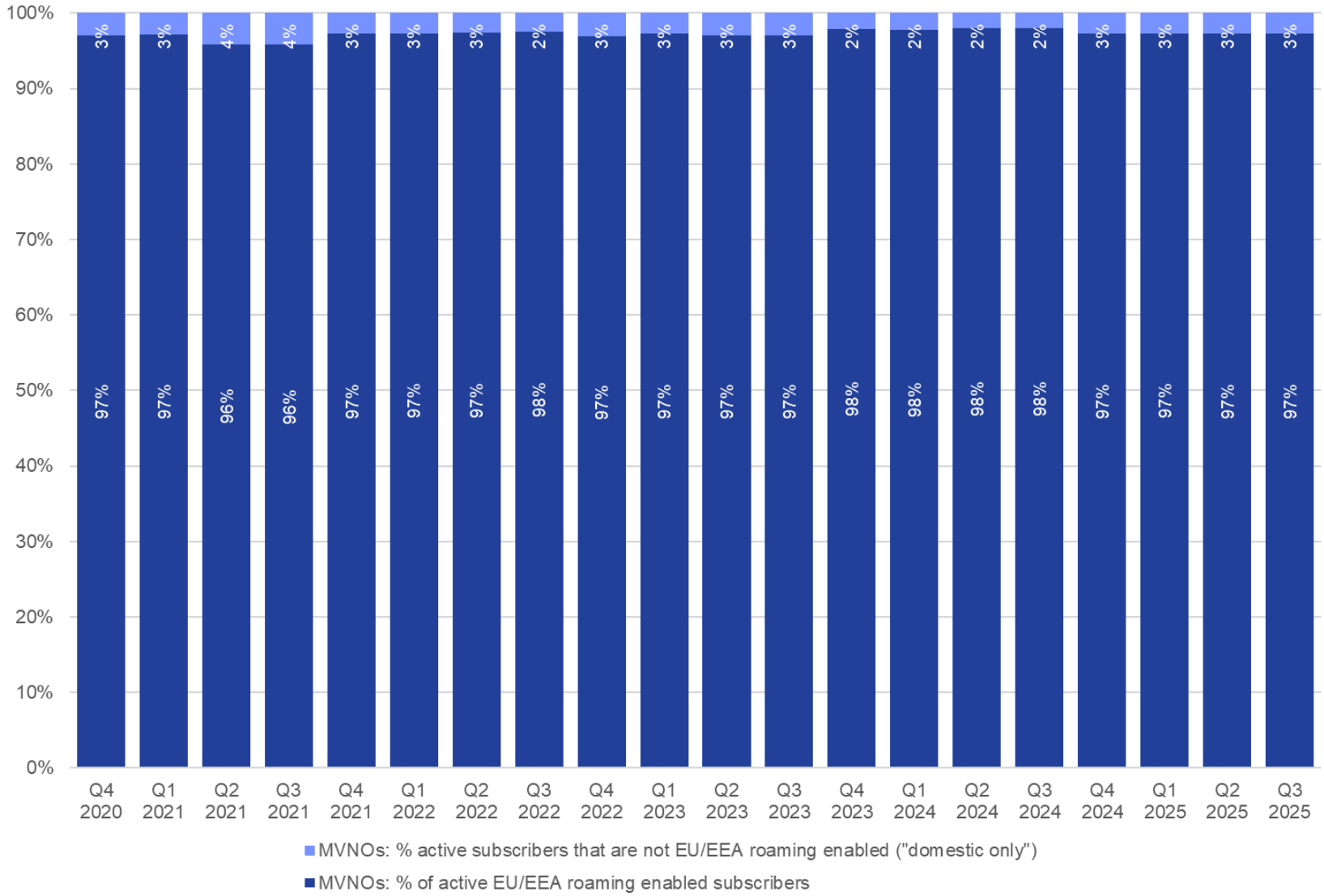


Figure 36 depicts the average share of total subscribers from MVNOs only at EEA level, which compares the percentage of active EU/EEA roaming enabled subscribers to the percentage of subscribers that are not EU/EEA roaming enabled (domestic only) for Q4 2020 - Q3 2025.

5.4.2. Consumption patterns for RLAH services (voice, SMS and data)

Figure 37: RLAH, calls made: EEA average number of RLAH minutes per month per roaming subscriber, MNOs and MVNOs, Q4 2020 – Q3 2025.

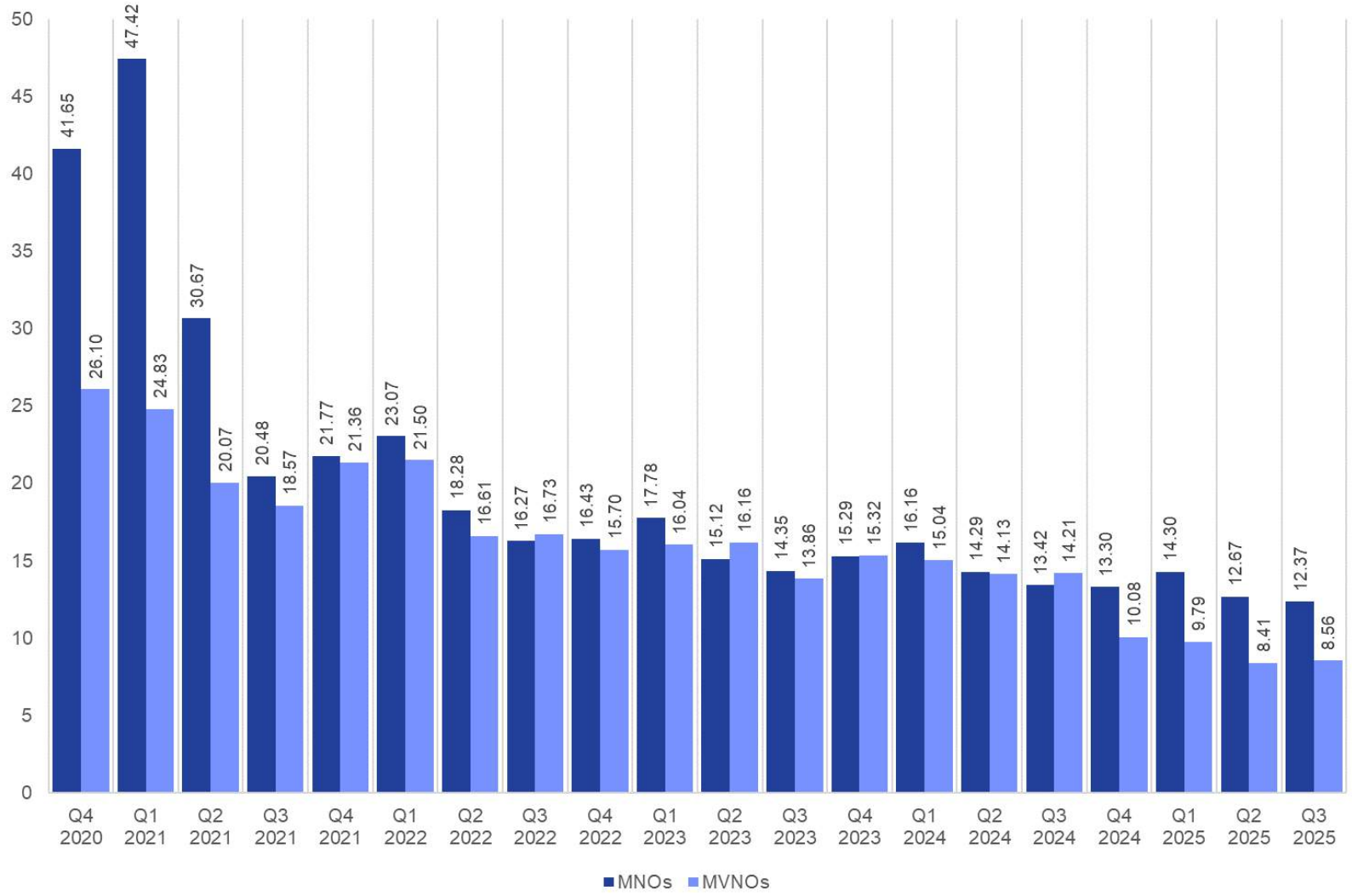


Figure 37 compares the EEA average number of RLAH minutes for calls made (per month per subscriber) of subscribers to different type of roaming providers (MNOs vs MVNOs) for Q4 2020 - Q3 2025.

Figure 38: RLAH, data services: EEA average number of GB per month per roaming subscriber, MNOs and MVNOs, Q4 2020 – Q3 2025.

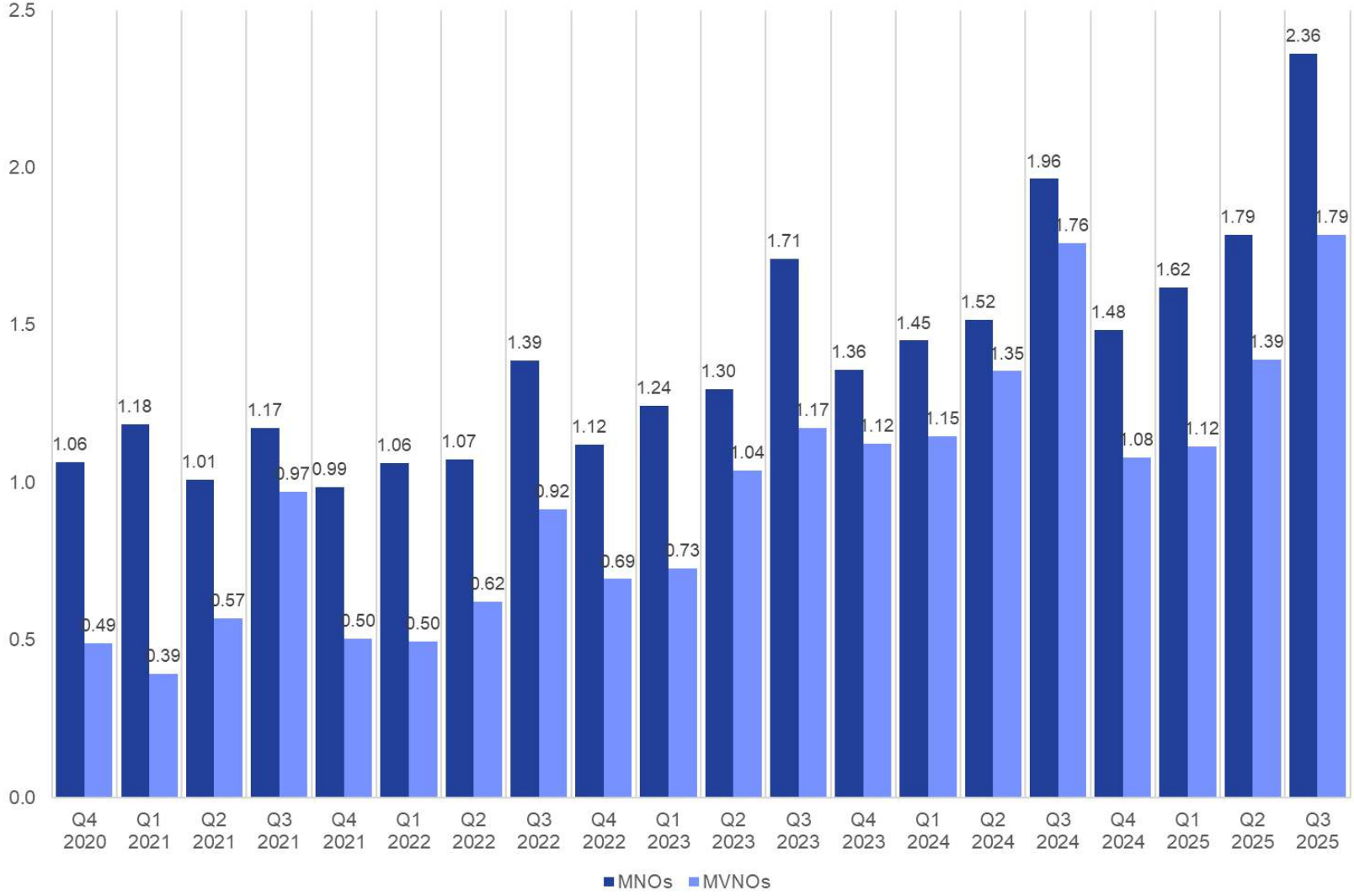


Figure 38 compares the EEA average RLAH data consumption per subscriber between MNOs and MVNOs for Q4 2020 - Q3 2025.

5.4.3. Payment to the host operator for the provision of wholesale international roaming services

Figure 39: EEA average of the payment to the host operator for the provision of wholesale roaming services (per unit), MVNOs, Q4 2020 – Q3 2025

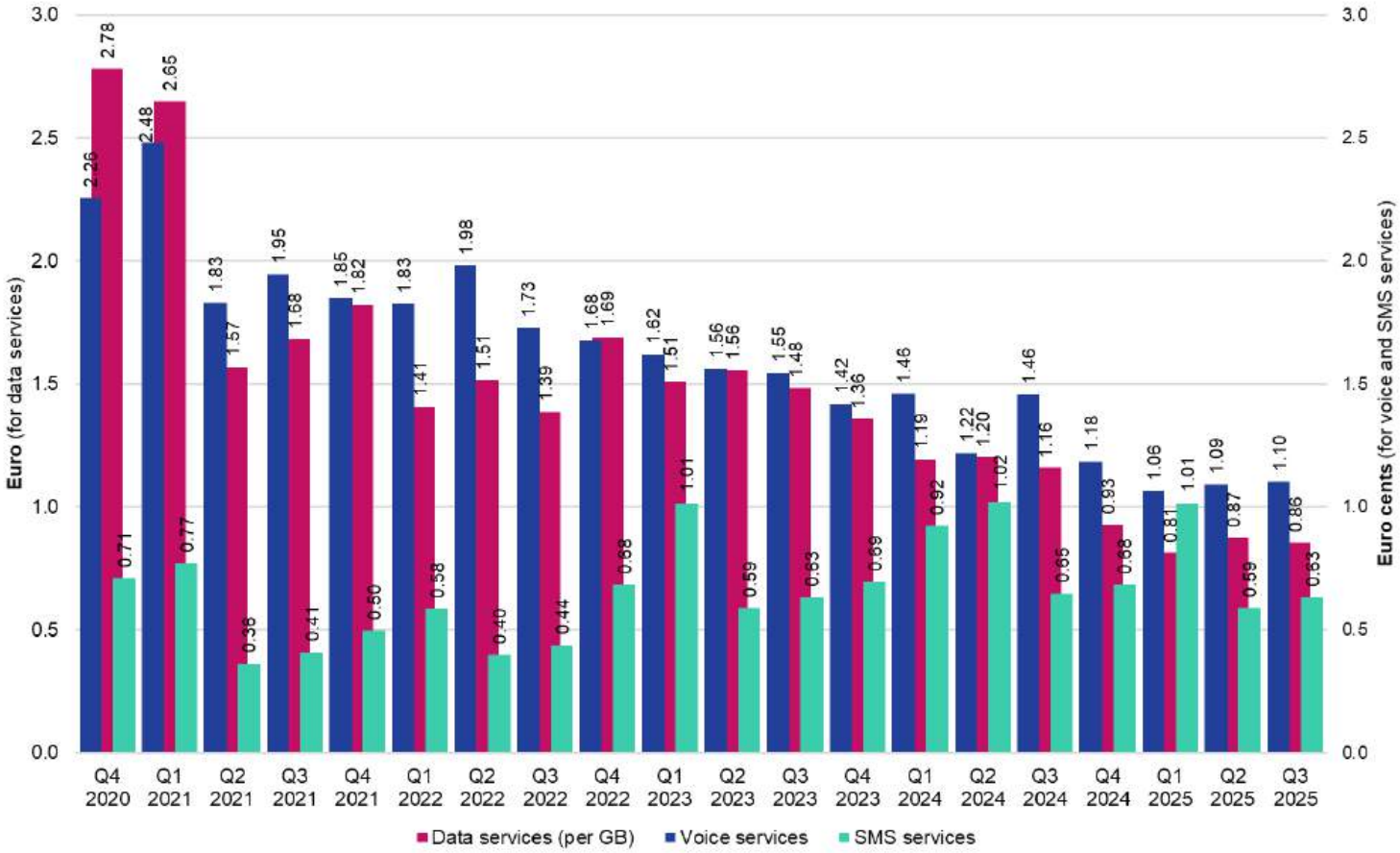


Figure 39 depicts the average cost to the host operator for the provision of wholesale roaming services (per unit) at EEA level. This average was calculated by dividing the payments for wholesale outbound roaming (of each service) by number of wholesale volumes for Q4 2020 – Q3 2025.
Data services: prices are expressed in EUR.
Germany excluded for wholesale voice services from Q4 2022 till Q3 2024.

5.5. M2M data

5.5.1. Connected devices

Figure 40: Total number of active connected objects/devices at EEA level (with roaming enabled or domestic only), Q4 2020 - Q3 2025, in millions

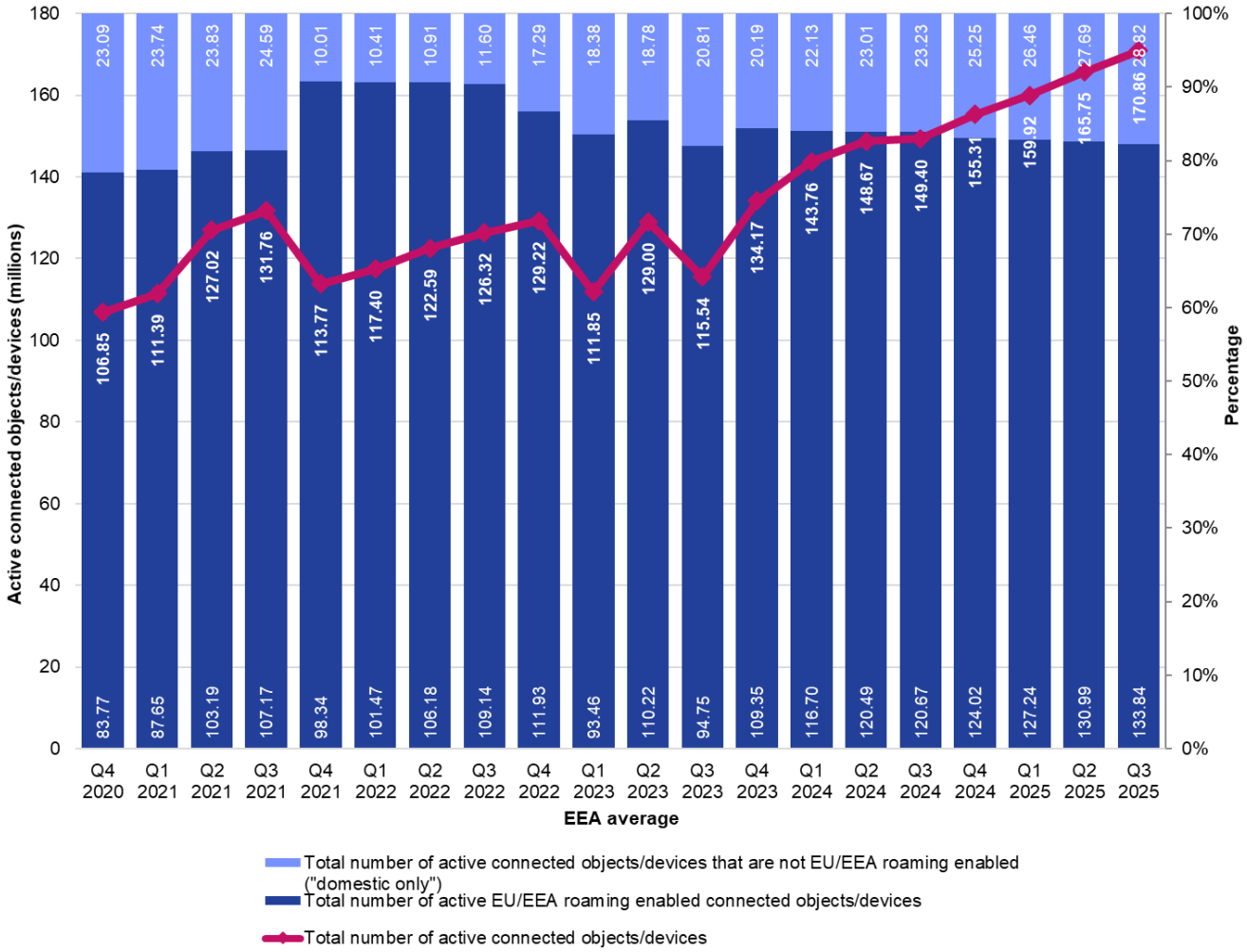


Figure 40 depicts the share of Total number of active EEA roaming enabled connected objects/devices and Total number of active connected objects/devices that are not EEA roaming enabled (domestic only) together with Total number of active connected objects/devices in EEA, Q4 2020 – Q3 2025.

5.5.2. Consumption patterns (voice, data and SMS)

Figure 41: EEA average: share of retail consumption of roaming and domestic data per month from connected devices/objects (in GB), Q4 2020 - Q3 2025

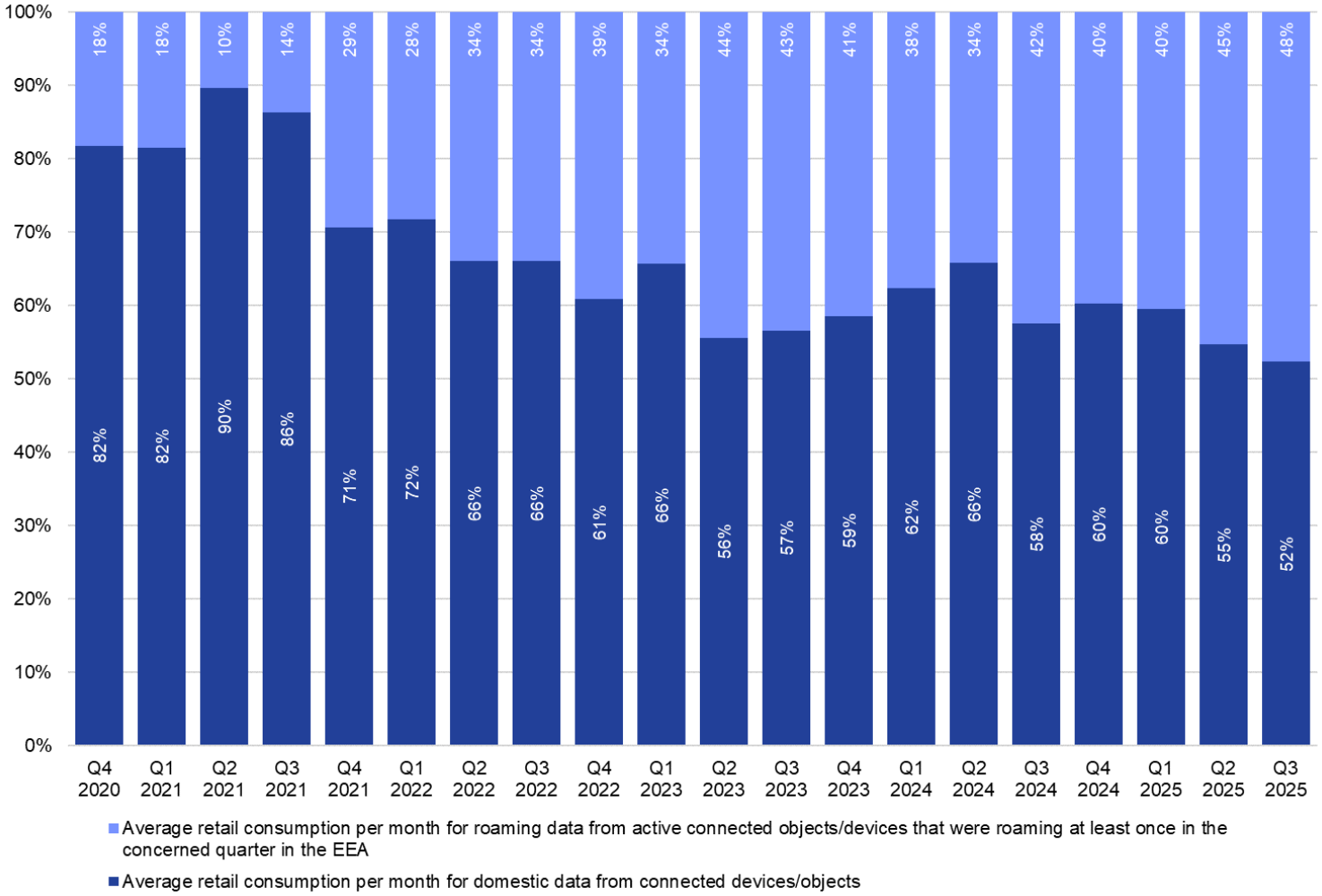


Figure 41 depicts the share of EEA average retail consumption of roaming and domestic data per month from connected objects/devices. This share is calculated by comparing the number of average retail consumption per month for roaming data from active connected objects/devices that were roaming at least once in the concerned quarter in the EEA with the number of average retail consumption per month for domestic data from connected objects/devices to arrive at an average for Q4 2020 – Q3 2025.

Figure 42: EEA average: share of retail consumption of roaming and domestic calls made per month from connected devices/objects (in GB), Q4 2020 - Q3 2025

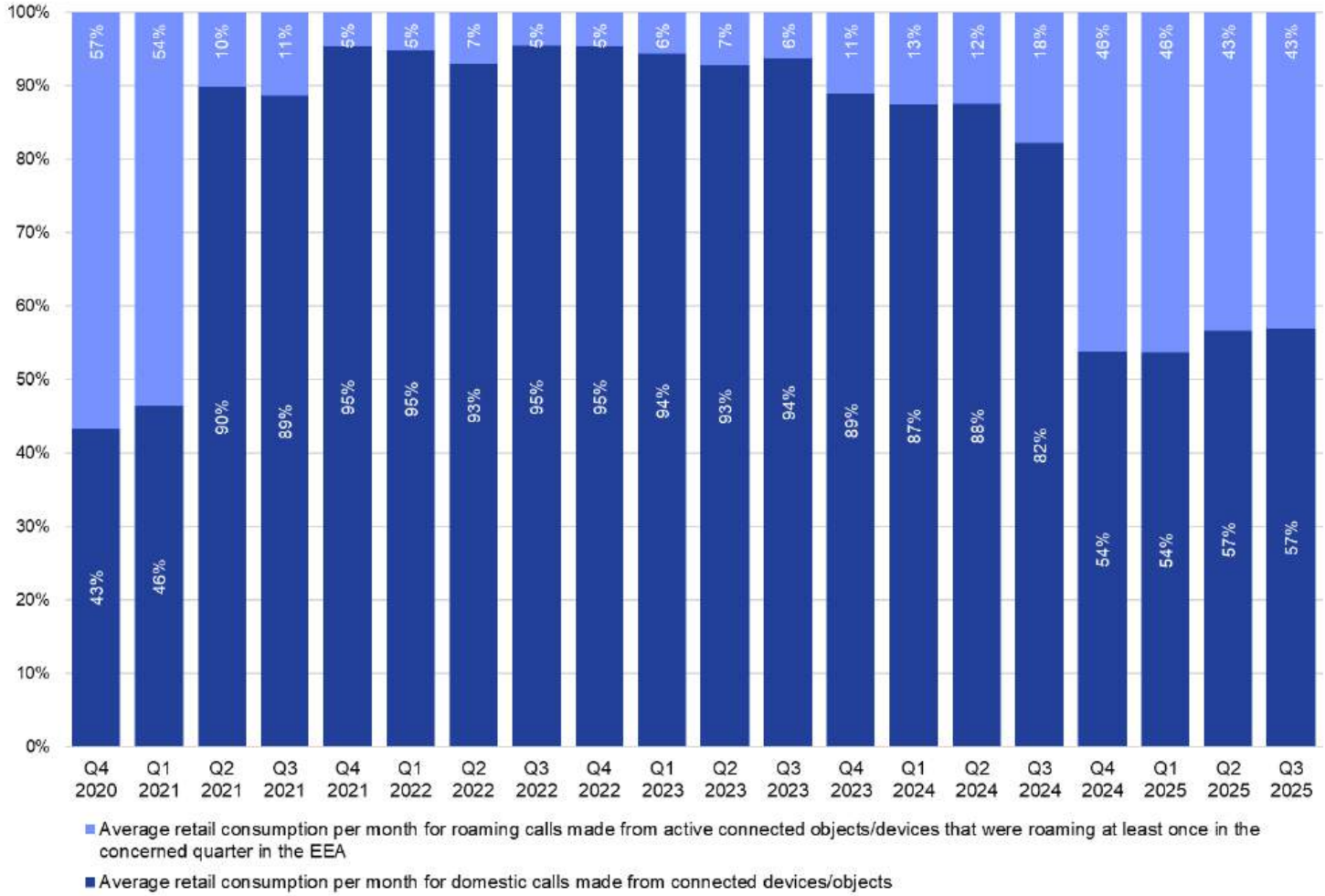


Figure 42 depicts the share of EEA average retail consumption of roaming and domestic calls made per month from connected objects/devices. This share is calculated by comparing the number of average retail consumption per month for roaming calls made from active connected objects/devices that were roaming at least once in the concerned quarter in the EEA with the number of average retail consumption per month for domestic calls made from connected objects/devices to arrive at an average for Q4 2020 – Q3 2025.

Figure 43: EEA average: share of retail consumption of roaming and domestic SMS per month from connected devices/objects, Q4 2020 - Q3 2025

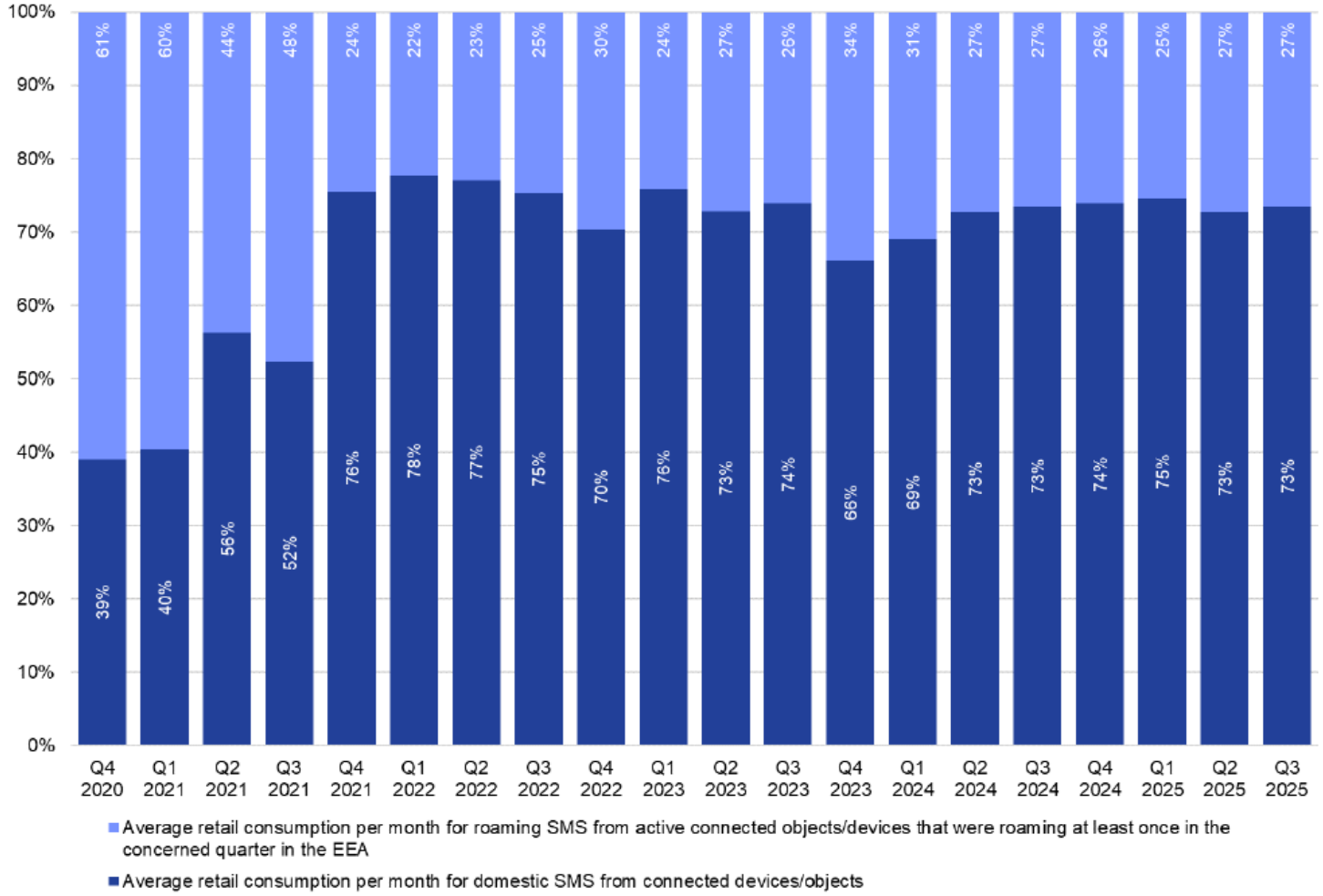


Figure 43 depicts the share of EEA average retail consumption of roaming and domestic SMS per month from connected objects/devices. This share is calculated by comparing the number of average retail consumption per month for roaming SMS from active connected objects/devices that were roaming at least once in the concerned quarter in the EEA with the number of average retail consumption per month for domestic SMS from connected objects/devices to arrive at an average for Q4 2020 – Q3 2025.

5.6. Transparency and Comparability of Roaming Tariffs

5.6.1. Transparency of retail offers QoS

Figure 44: Percentage of roaming providers offering specific network technologies to their subscribers when roaming in the EU/EEA

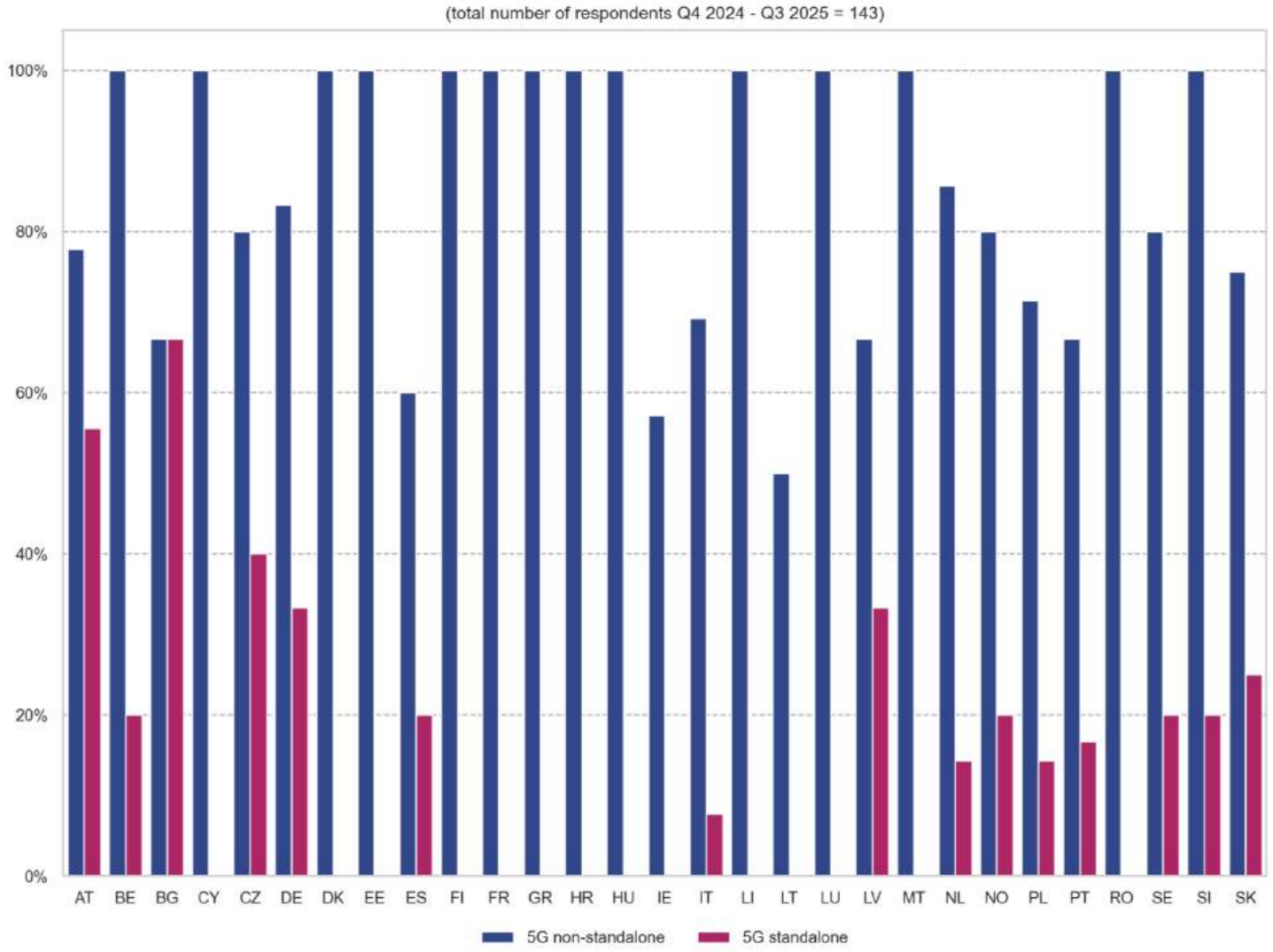


Figure 44 depicts the share of roaming providers (out of total respondents in each country) that are offering certain network technologies to their subscribers when roaming in the EU/EEA. For example, if 100 % of roaming providers in a certain country offer 5G non-standalone, this means that all domestic providers offer 5G non-standalone services to their subscribers while roaming in the EEA.

Figure 45: Number of international roaming providers offering 5G non-standalone roaming services in different EEA countries (excluding national providers)

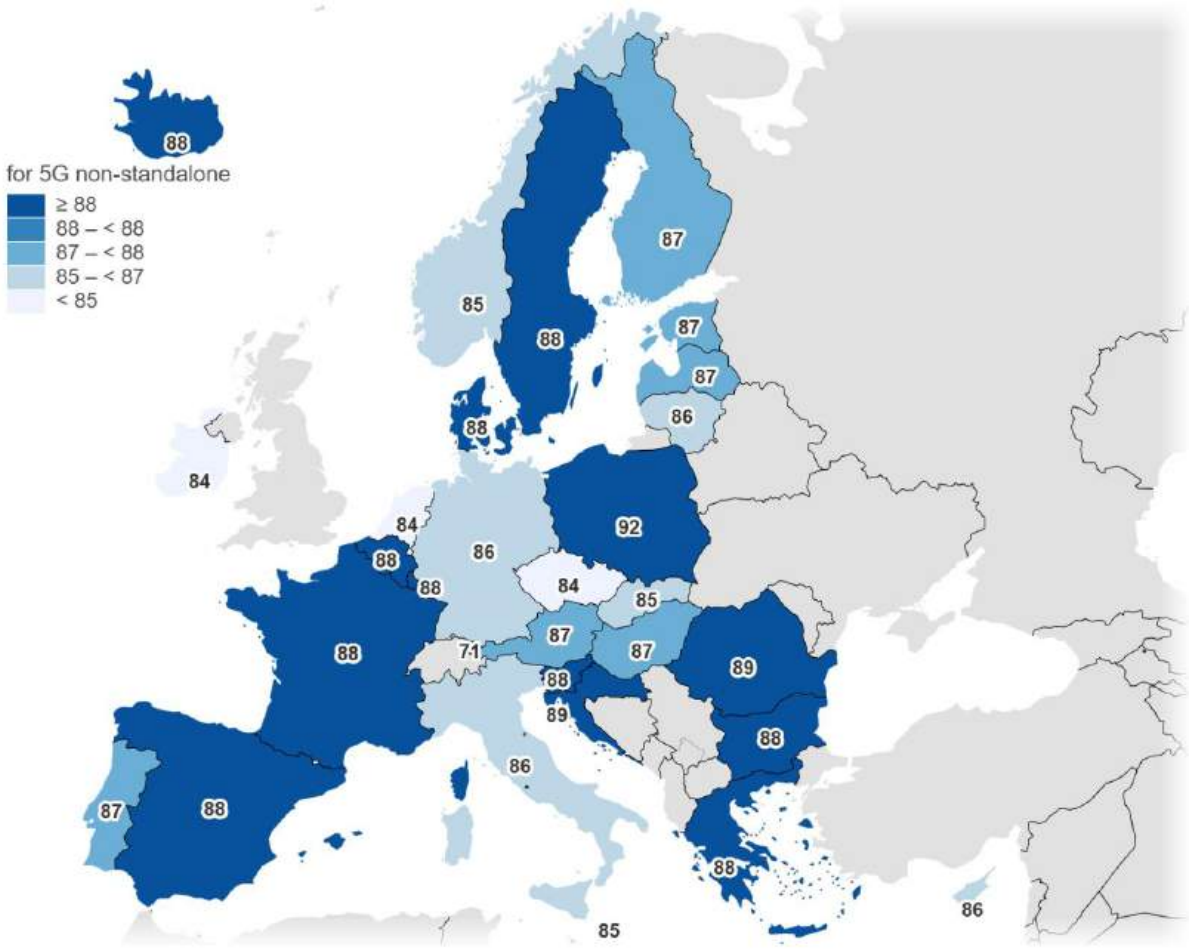


Figure 45 depicts a map of the EEA region which shows how many EEA roaming providers offer 5G non-standalone roaming services in each EEA country to illustrate the state of implementation of 5G roaming. For example, if 55 roaming providers offer 5G non-standalone roaming services in Finland, this means that 55 roaming providers from all over the EEA have reached agreements with Finnish providers allowing their subscribers (e.g. from Austria, Belgium, …) to use 5G non-standalone services while roaming in Finland. Map includes data from 108 out of 149 operators.

Figure 46: Percentage of roaming providers differentiating between technologies when offering services at home

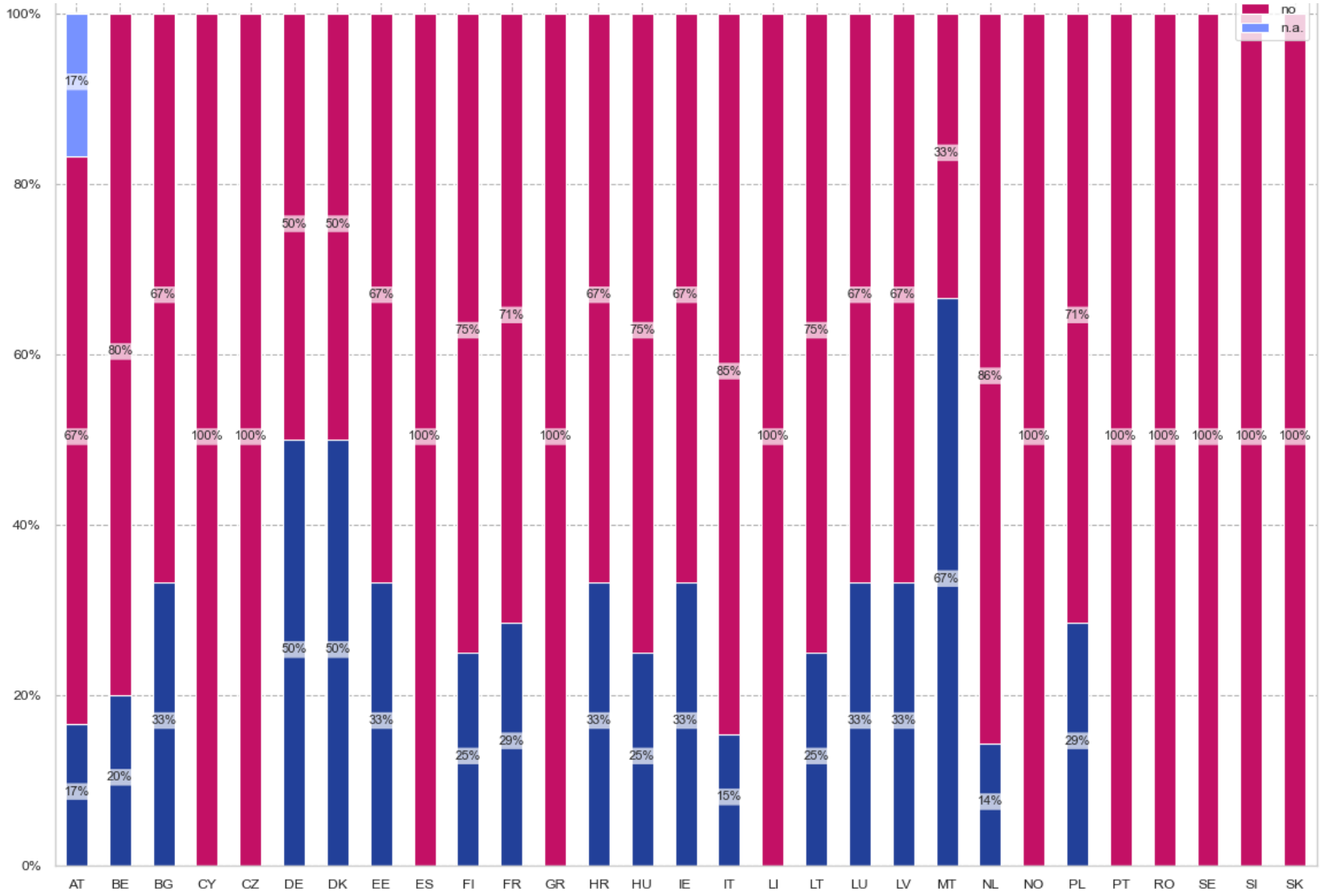


Figure 46 depicts the share of roaming providers (out of total respondents in each country) which differentiate between technologies when offering services at home. For example, if 100 % of respondents in one country selected “yes”, then this means that all domestic providers in this country differentiate between technologies when they offer services domestically. Number of respondents: 136.

5.6.2. Application of FUPs

Figure 47: Number of MNOs and MVNOs using different types of FUP measures (based on data collected by BEREC for TACR report in 2020 – 2025; total number of respondents that could be identified as either MNO or MVNO Q4 2024 – Q3 2025 = 148)

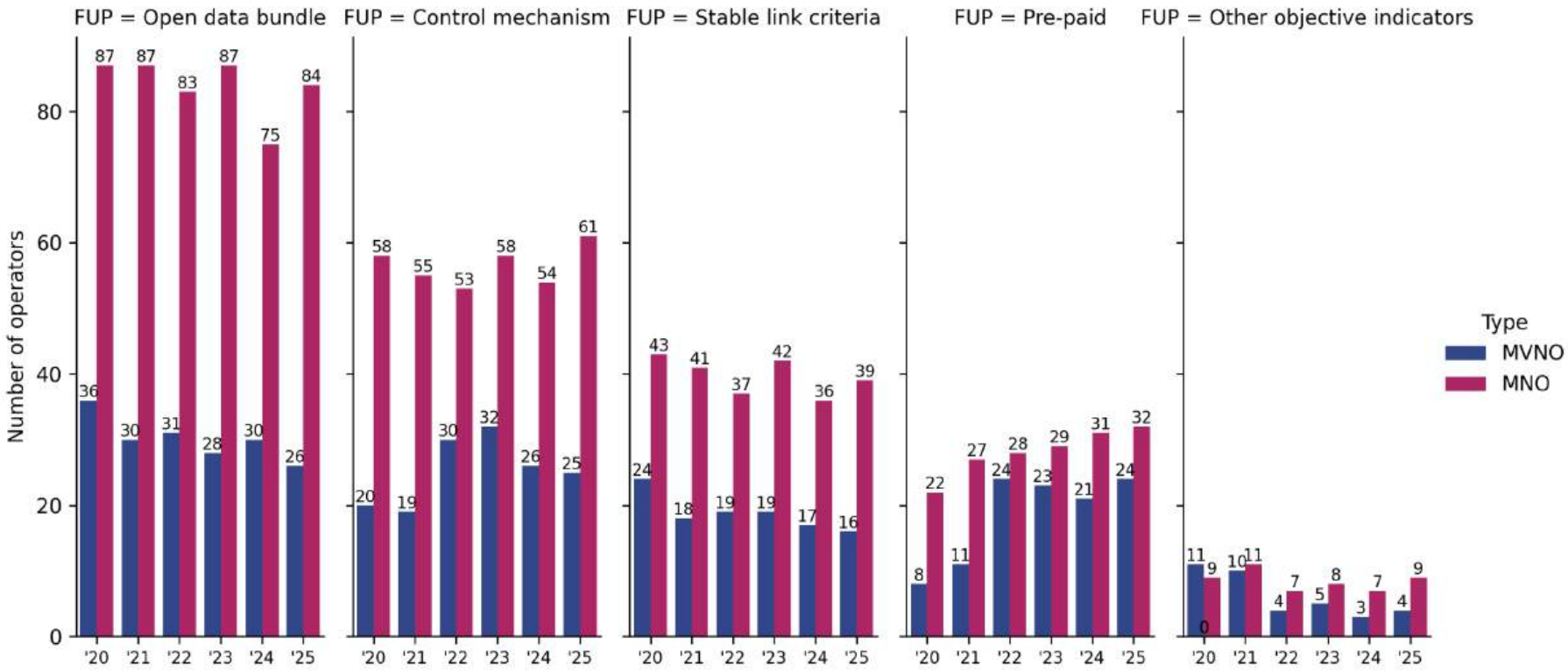


Figure 47 depicts the number of MNOs and MVNOs using different types of FUP measures over the period between 2020 and 2025.

Figure 48: Surcharges levied by MNOs and MVNOs for voice services when exceeding the FUP

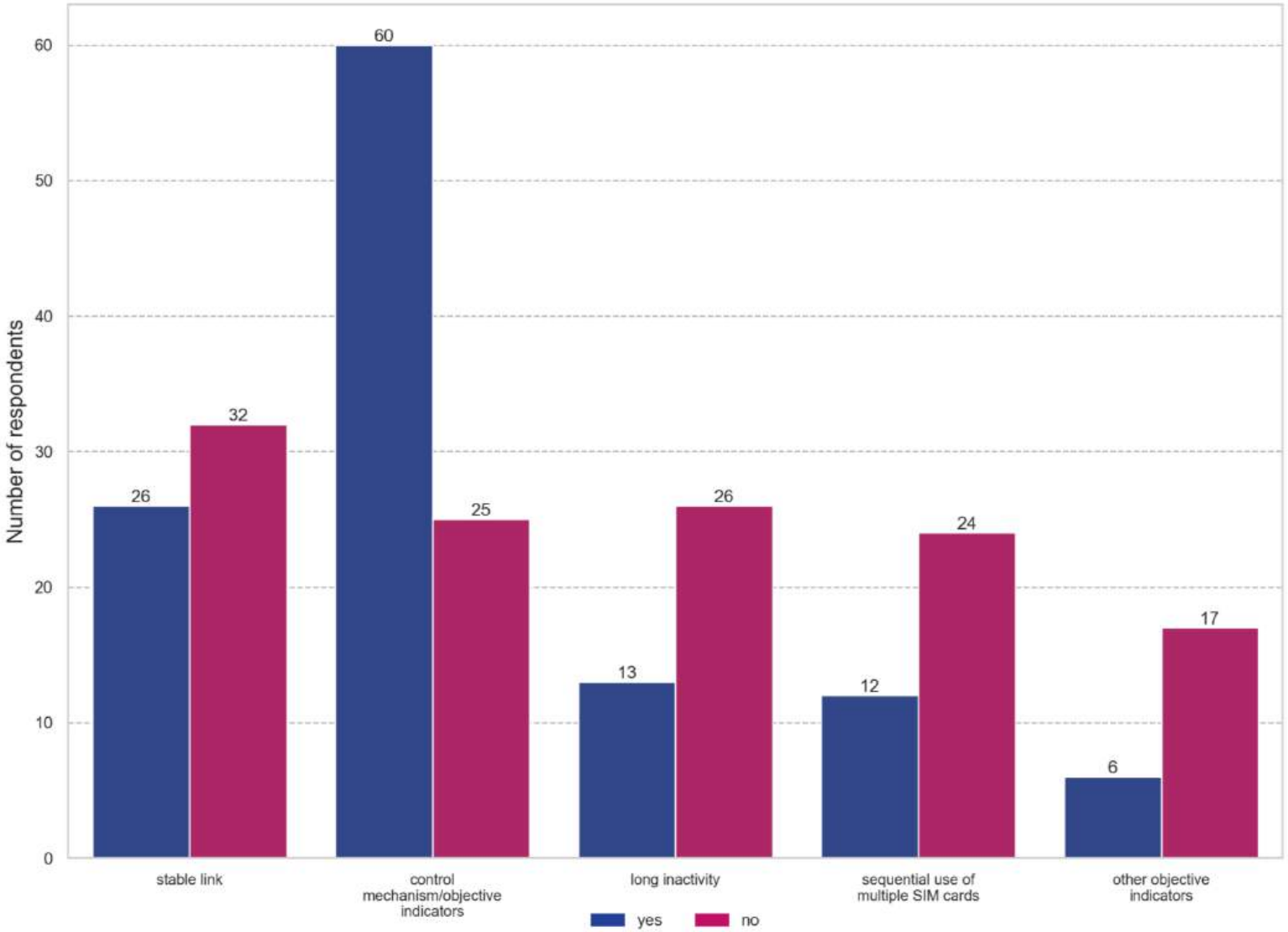


Figure 48 depicts the number of MNOs and MVNOs that levied surcharges for voice services when exceeding different types of FUP. Number of respondents from left set of bars to right: 69, 92, 52, 50, 35 (difference is operators that answered “n.a.”).

Figure 49: Surcharges levied by MNOs and MVNOs for data services when exceeding the FUP measures

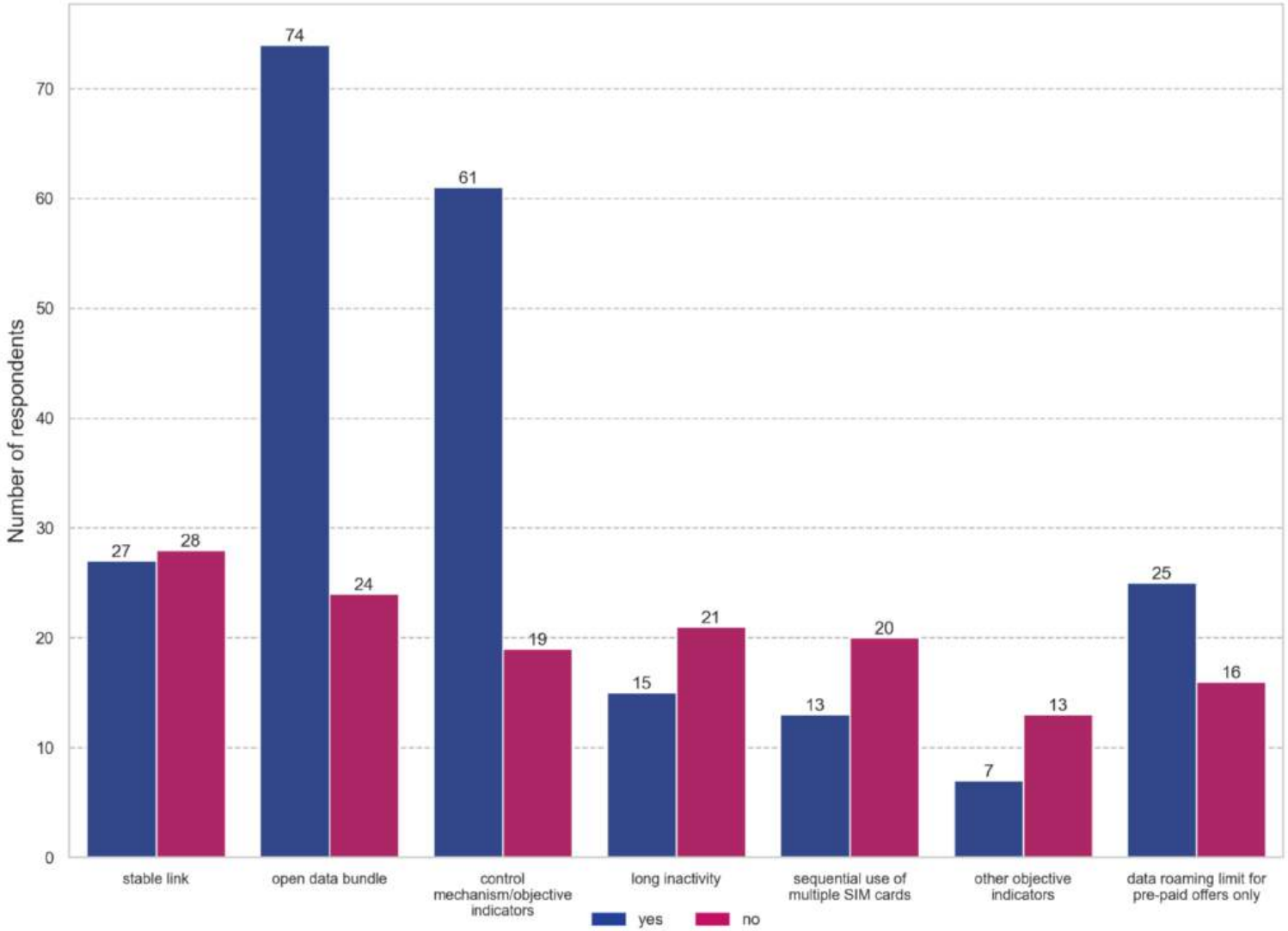


Figure 49 depicts the number of MNOs and MVNOs that levied surcharges for data services when exceeding different types of FUP. Number of respondents from left set of bars to right: 65, 102, 87, 49, 46, 32, 52 (difference of sum of two bars to total number of respondents is operators that answered “n.a.”).

5.6.3. Information and tools for consumers

Figure 50: Information provided to subscribers with an open data bundle FUP about roaming limits

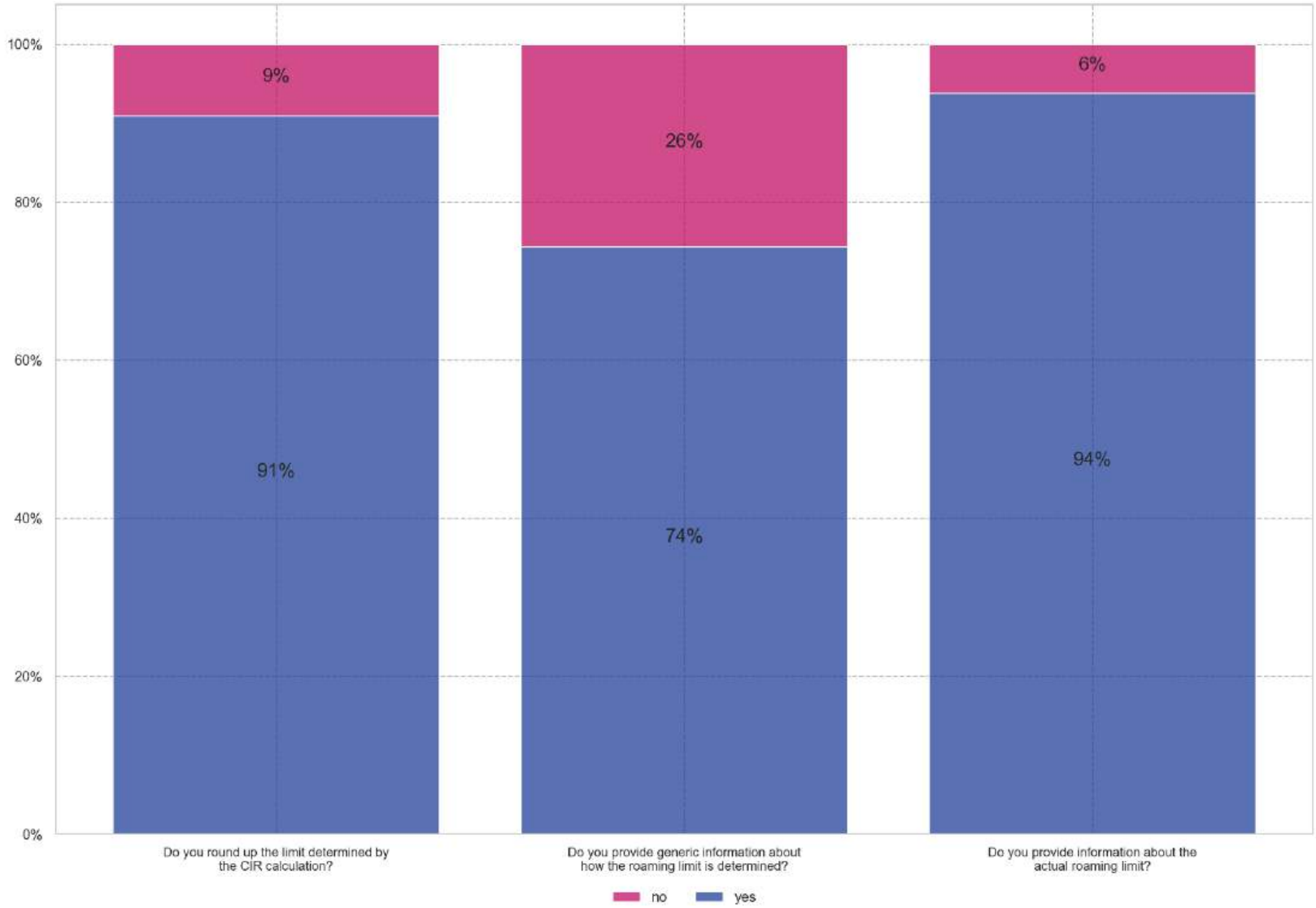


Figure 50 depicts the percentage of MNOs and MVNOs that provide information about how the roaming limit is determined and about the actual roaming limit to subscribers with an open data bundle FUP. Number of respondents from left bar to right: 124, 125, 125.

Figure 51: How information about roaming limits is provided to subscribers with an open data bundle FUP

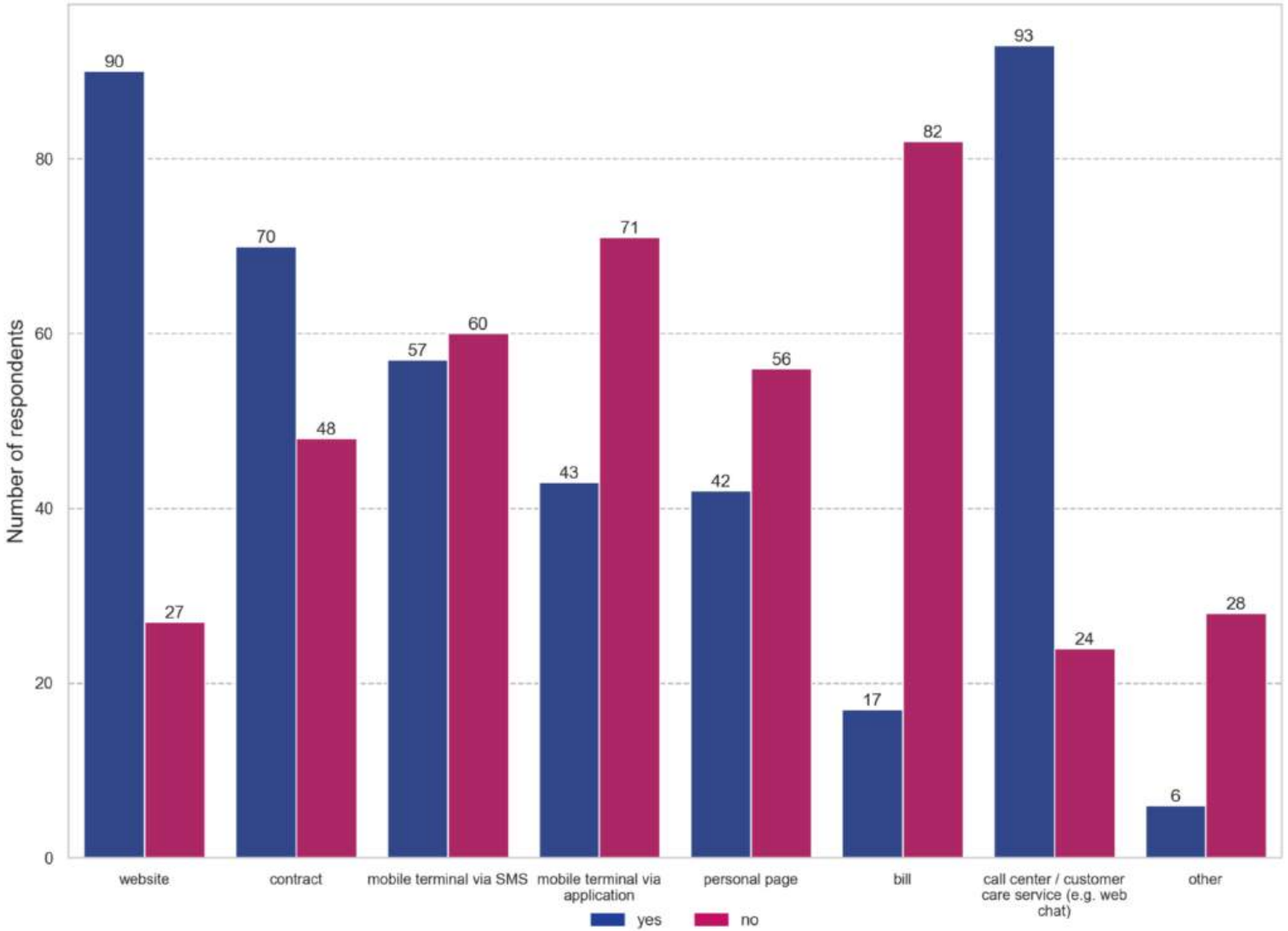


Figure 51 compares how many respondents use different channels to provide information about roaming limits to subscribers with an open data bundle FUP. Number of respondents from left set of bars to right: 129, 130, 129, 128, 124, 125, 129, 73 (difference is operators that answered “n.a.”).

Figure 52: Where information about roaming limits is provided on websites

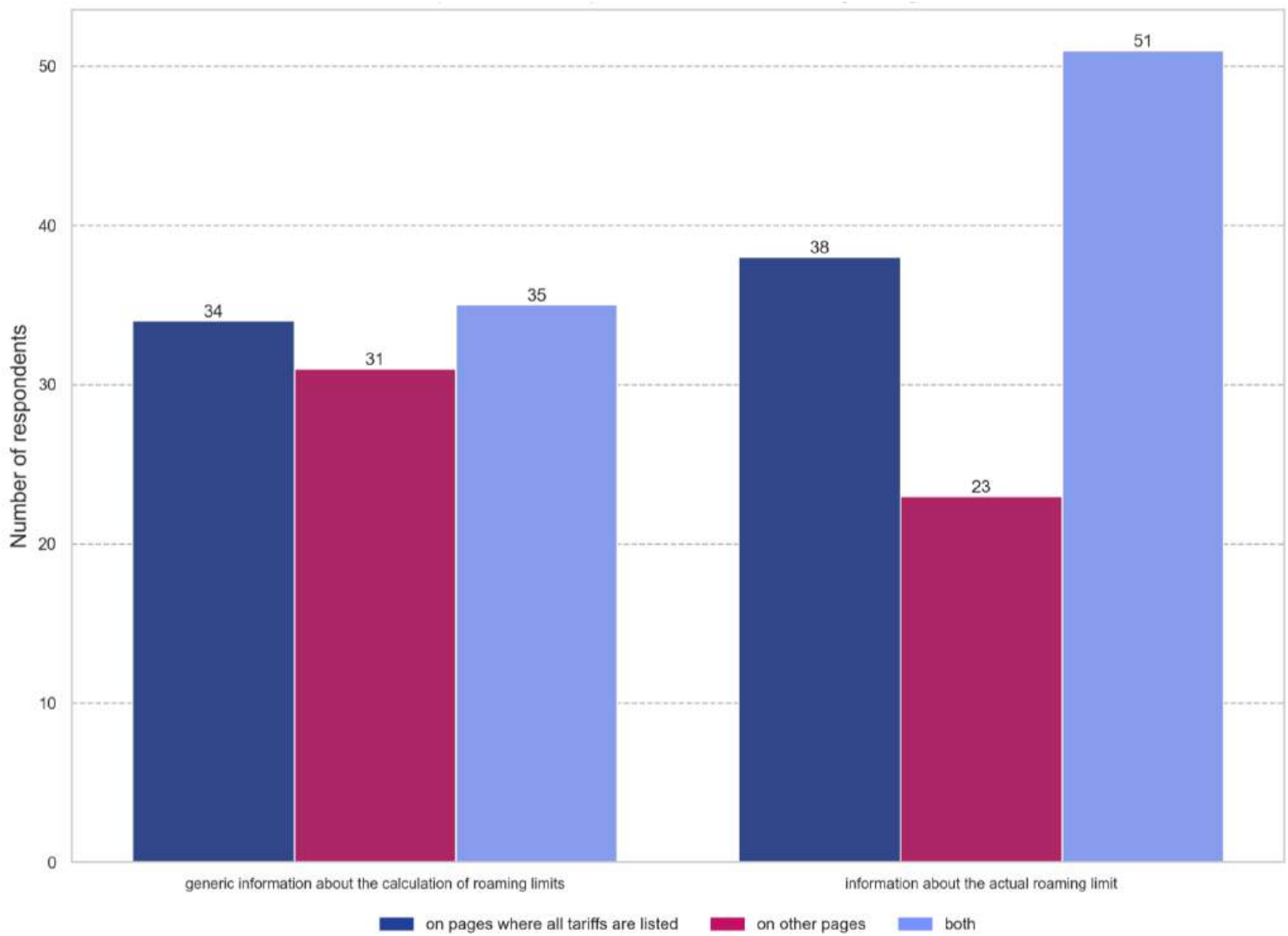


Figure 52 compares the number of respondents that provide information about roaming limits either on dedicated pages where all tariffs are listed or on other pages on their website, or on both types of pages. Number of respondents from left set of bars to right: 100, 112.

5.6.4. Non-EU/EEA destinations

Figure 53: Inclusion of consumption in non-EU/EEA destinations as part of the RLAH FUP

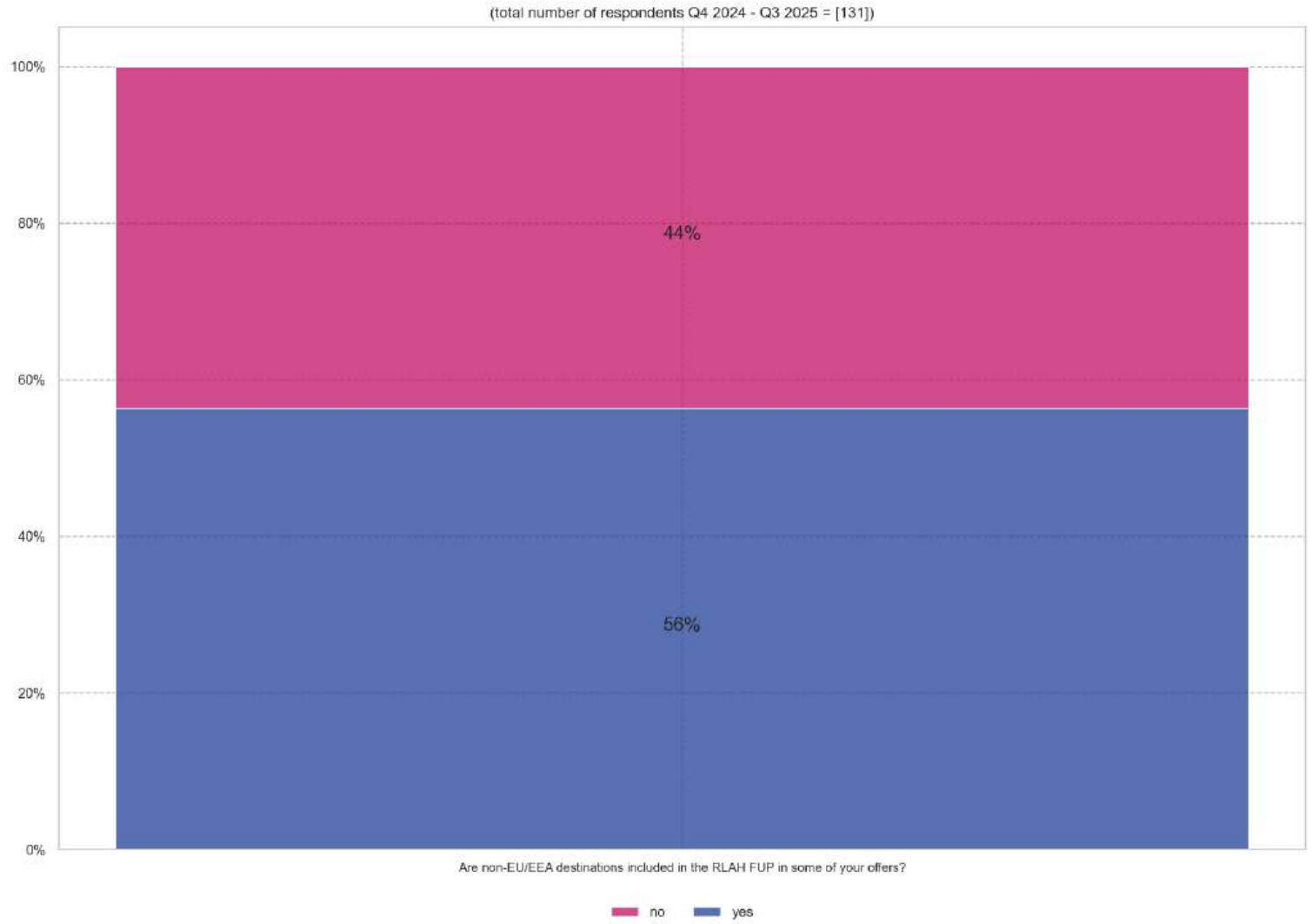


Figure 53 depicts how many respondents include the consumption of subscribers in non-EU/EEA destinations as part of the RLAH FUP in some of their offers. For example, for those providers responding “Yes”, if their subscriber has a FUP for 10 GB and consumes 5GB while roaming outside the EEA, this subscriber only has 5GB left before exhausting their FUP for roaming in the EEA.

5.6.5. Alternative tariffs

Figure 54: Percentage of roaming providers offering alternative tariffs (based on data collected by BEREC for TACR report in 2018 – 2025)

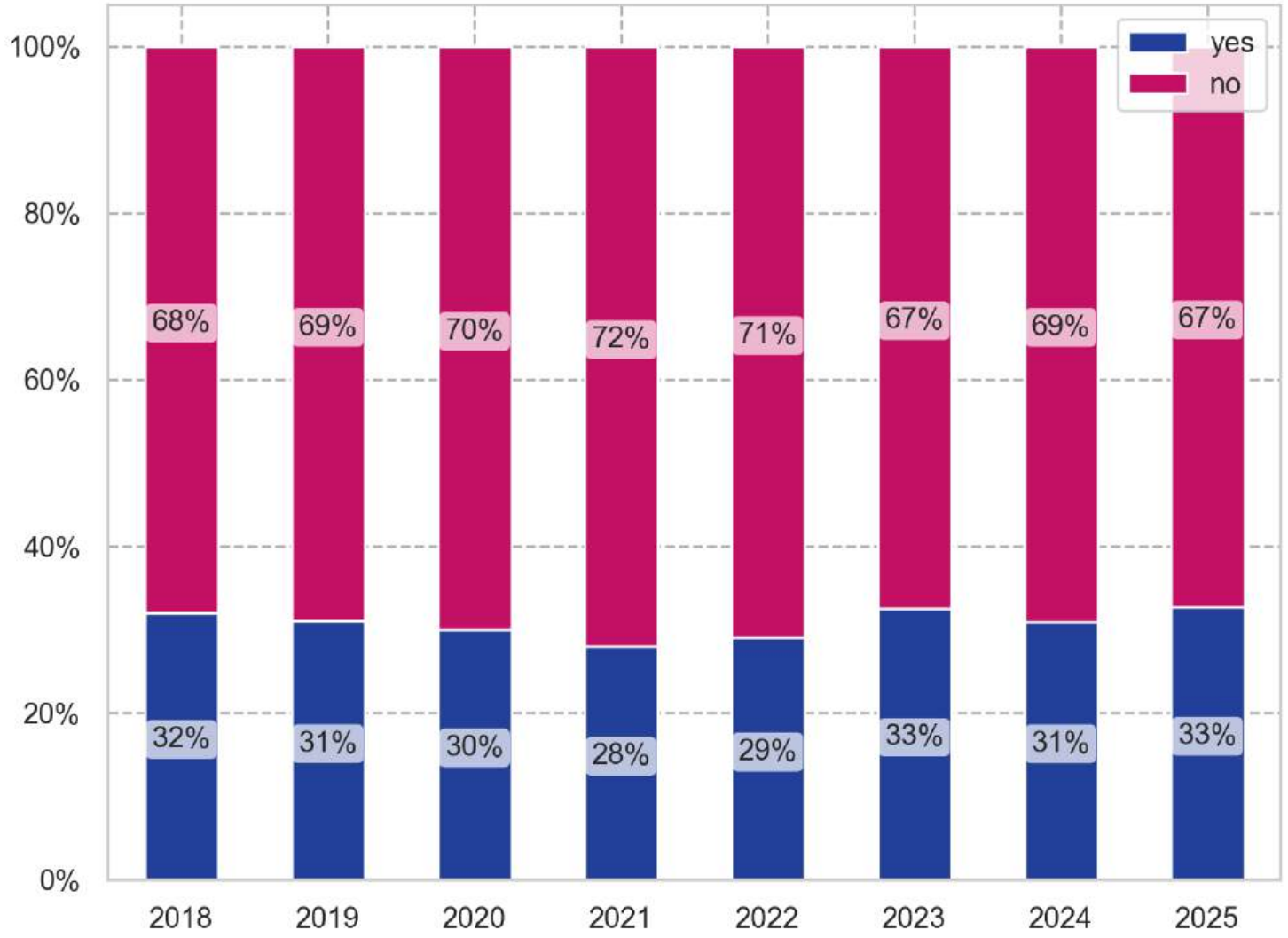


Figure 54 depicts the percentage of respondents offering alternative tariffs between 2018 and 2025.

Figure 55: Types of roaming packages (daily/weekly/monthly/other) offered by respondents (based on data collected by BEREC for TACR report in 2018 – 2025)

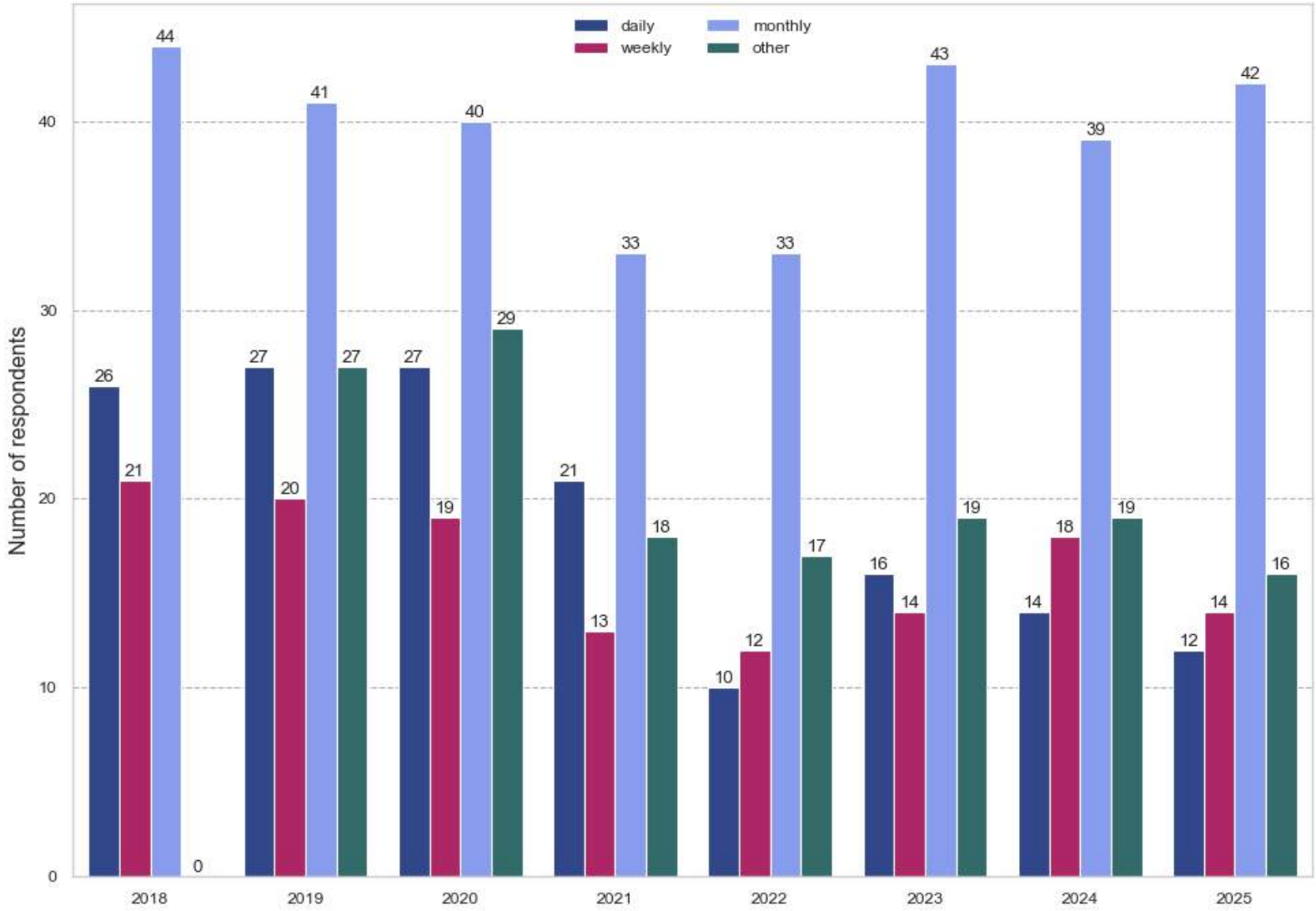


Figure 55 depicts the number of respondents offering daily, weekly, monthly or other types of roaming packages between 2018 and 2025.

Figure 56: Number of roaming providers that inform end users with alternative tariffs about the different issues

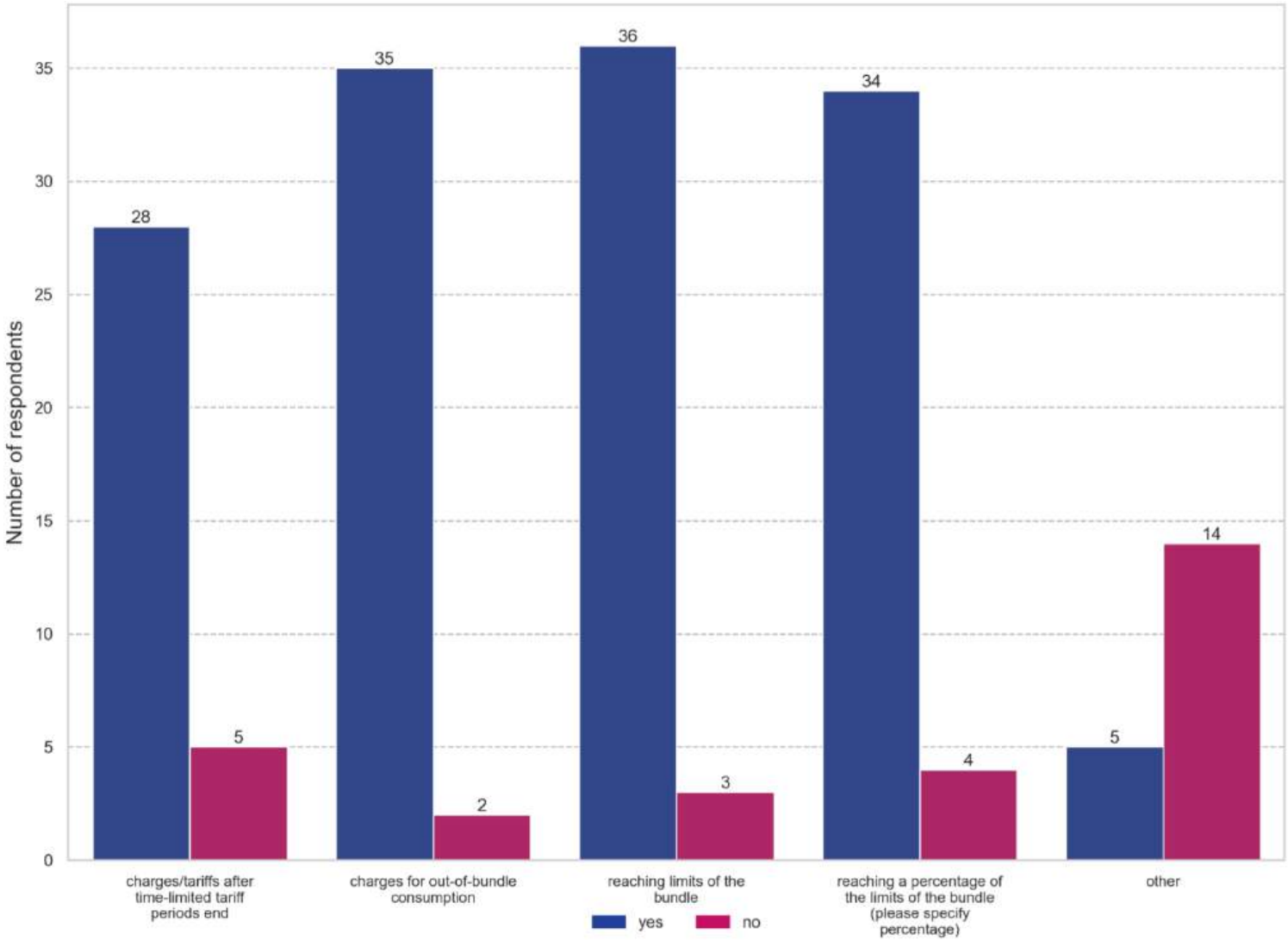


Figure 56 depicts the number of respondents that inform end users with alternative tariffs about charges, reaching limits, and other issues related to roaming. Number of respondents from left set of bars to right: 84, 85, 86, 85, 69 (difference is operators that answered “n.a.”).

Figure 57: Surcharges for alternative tariffs in EEA vs. non-EEA destinations

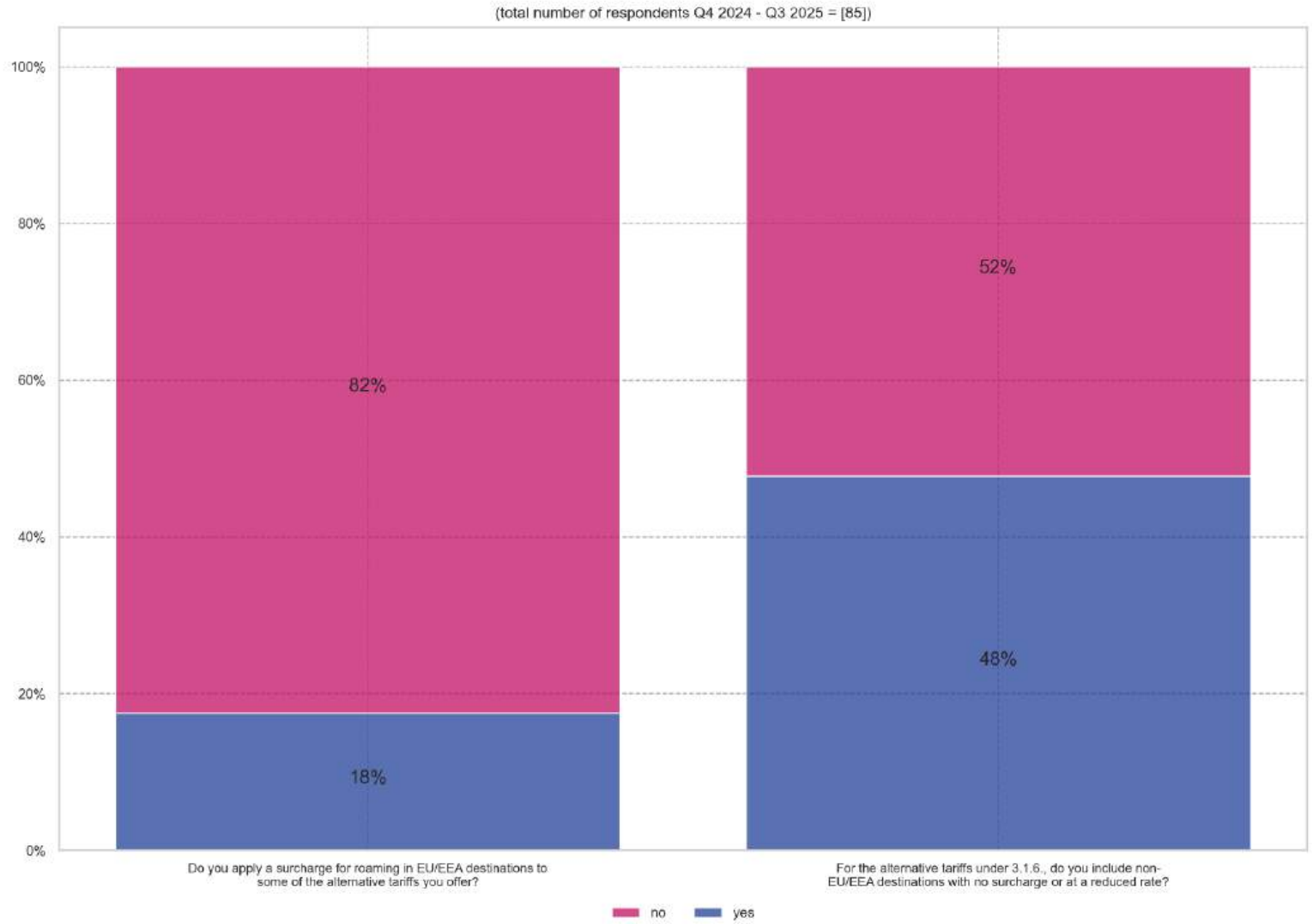


Figure 57 depicts the percentage of respondents that apply surcharges for alternative tariffs in EEA vs. non-EEA destinations.

5.6.6. Information provided

Figure 58: Number of operators that provide information about alternative tariffs/switching between tariffs through different channels

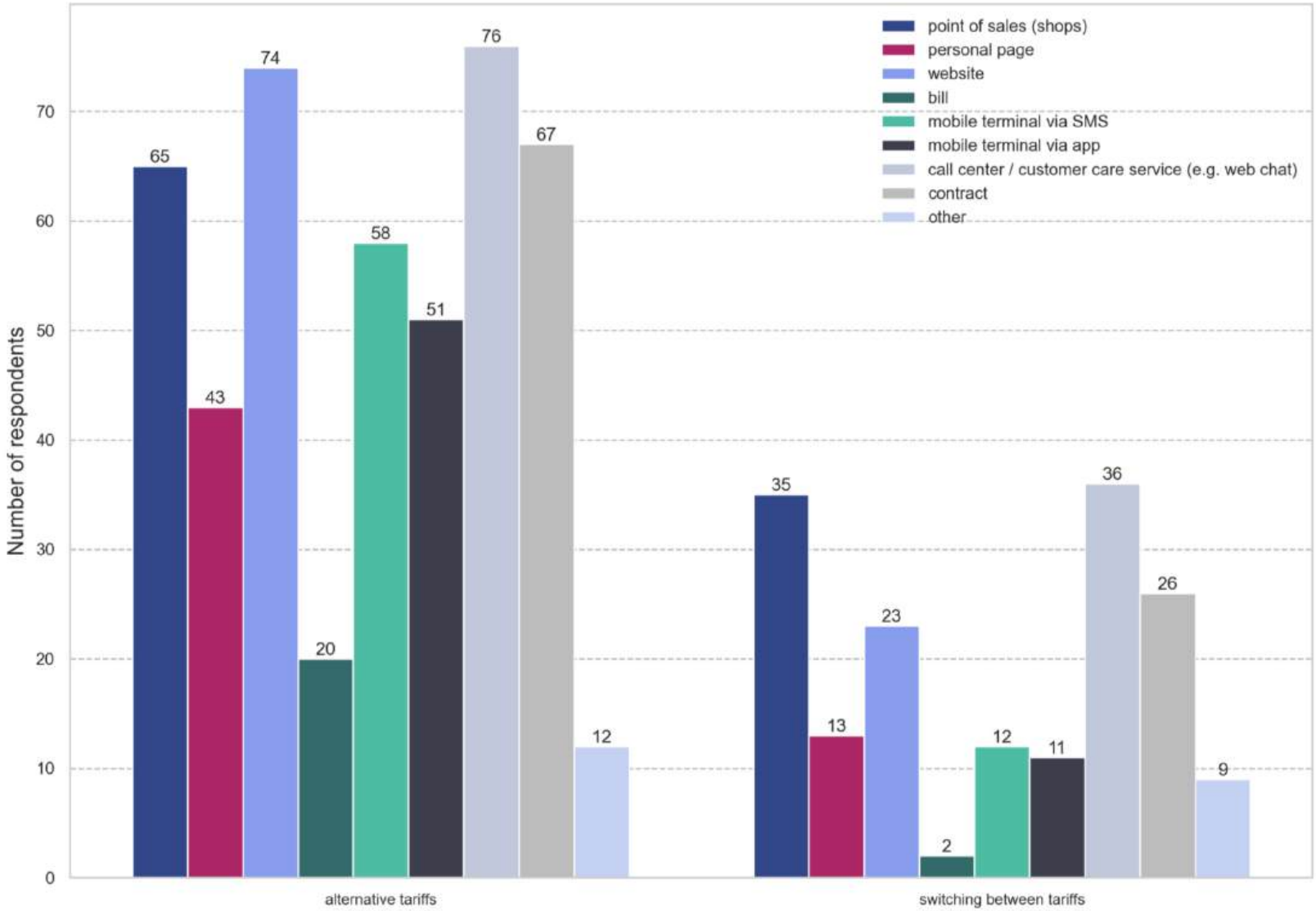


Figure 58 depicts the number of roaming providers (MNOs and MVNOs) that provide information about alternative tariffs/switching between tariffs through different channels. Number of respondents from left set of bars to right: 92, 92.

Figure 59: Number of operators that provide different types of QoS information on a per-network basis

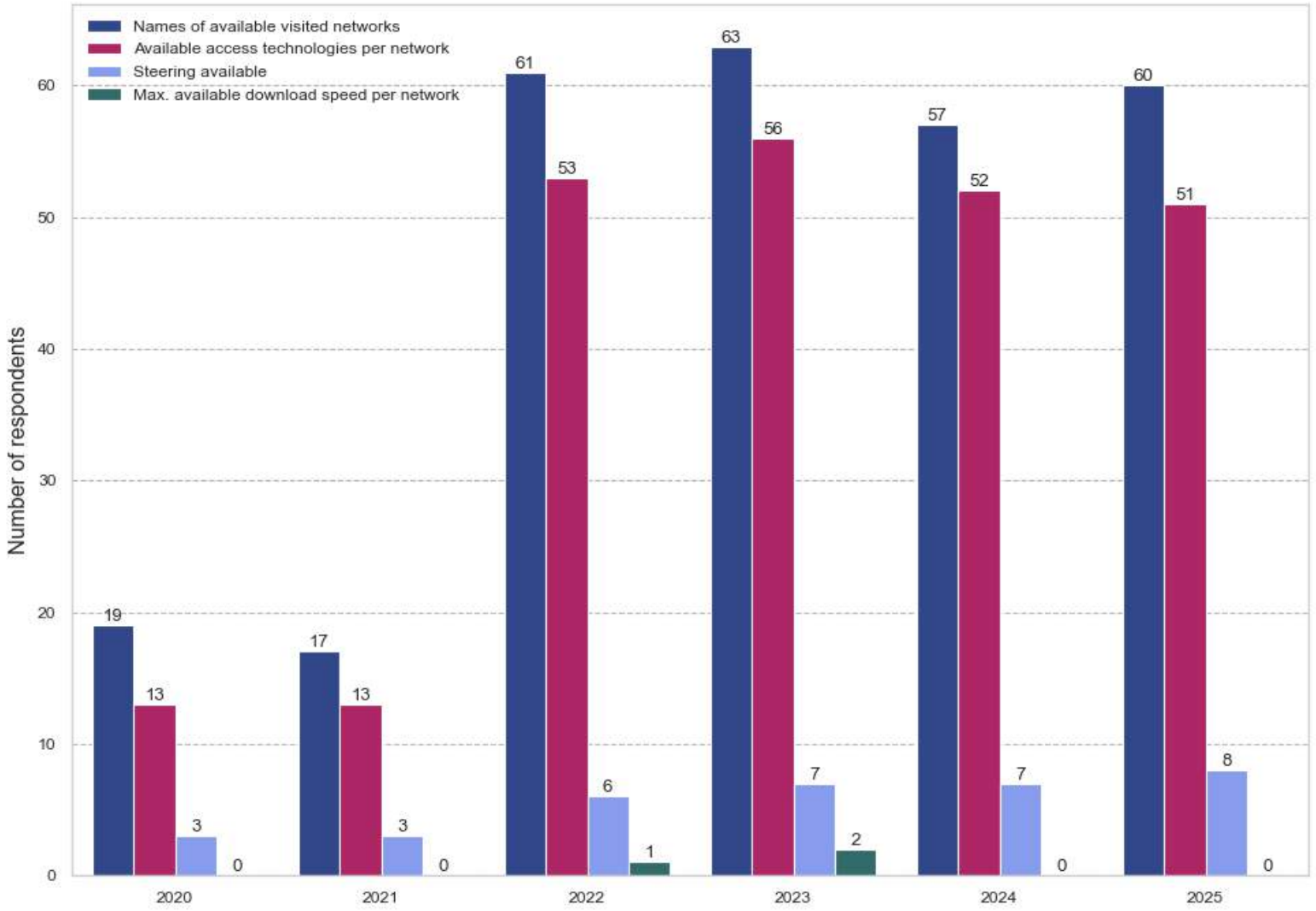


Figure 59 depicts the number of roaming providers (MNOs and MVNOs) that provide QoS-related information within the roaming context on a per-network basis over the period between 2020 and 2025. This includes information on the names of available visited networks, on the available access technologies per network, on the availability of steering and on the maximum available download speed per network.

Figure 60: Type of information provided on VAS charges in a roaming context

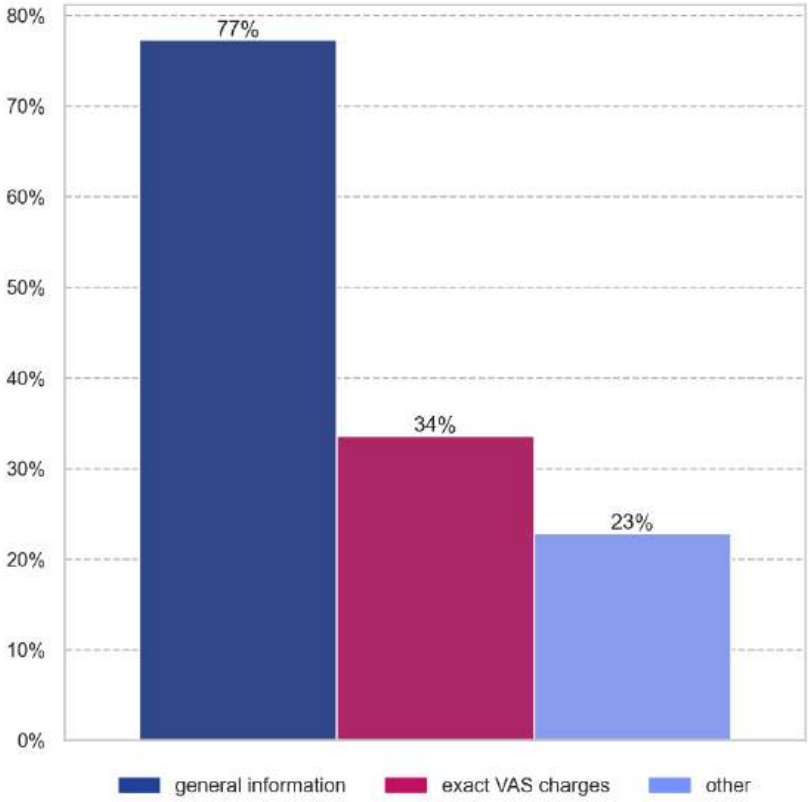
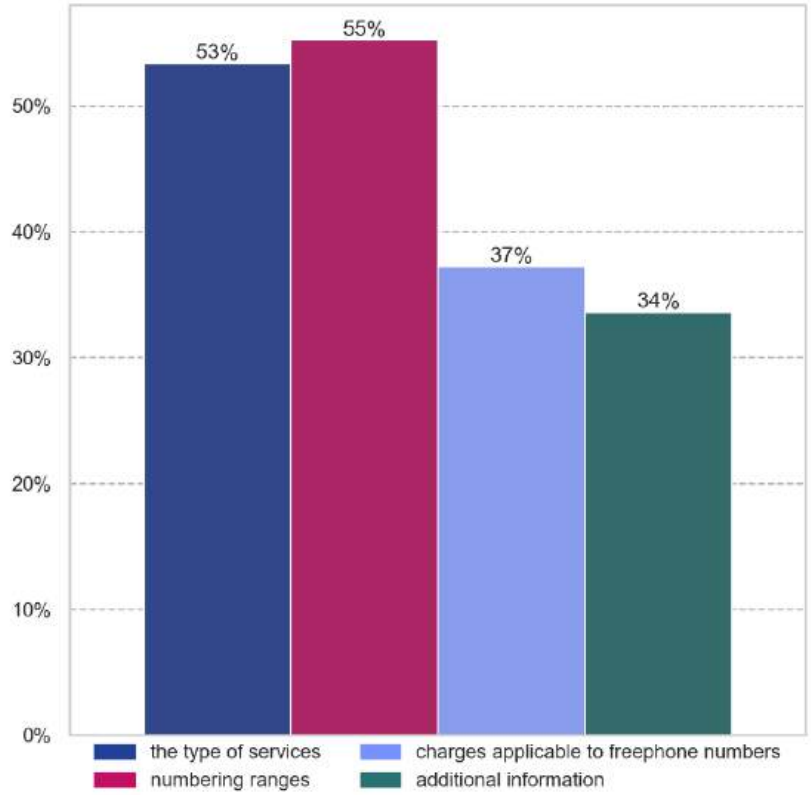


Figure 61: Type of information not related to charges provided on VAS while roaming



Figures 60 and 61 represent the percentage of roaming providers (MNOs and MVNOs) that provide different types of information on VAS in a roaming context. This includes the types of information provided on charges (Figure 60) and information on the type of services, the numbering ranges, the charges applicable to freephone information and additional information (Figure 61). Number of respondents from left bar to right: 122, 119, 83 (Figure 60), 118, 114, 110, 110 (Figure 61).

5.6.7. Cut-off limits

Figure 62: Types of cut-off limits offered by roaming providers

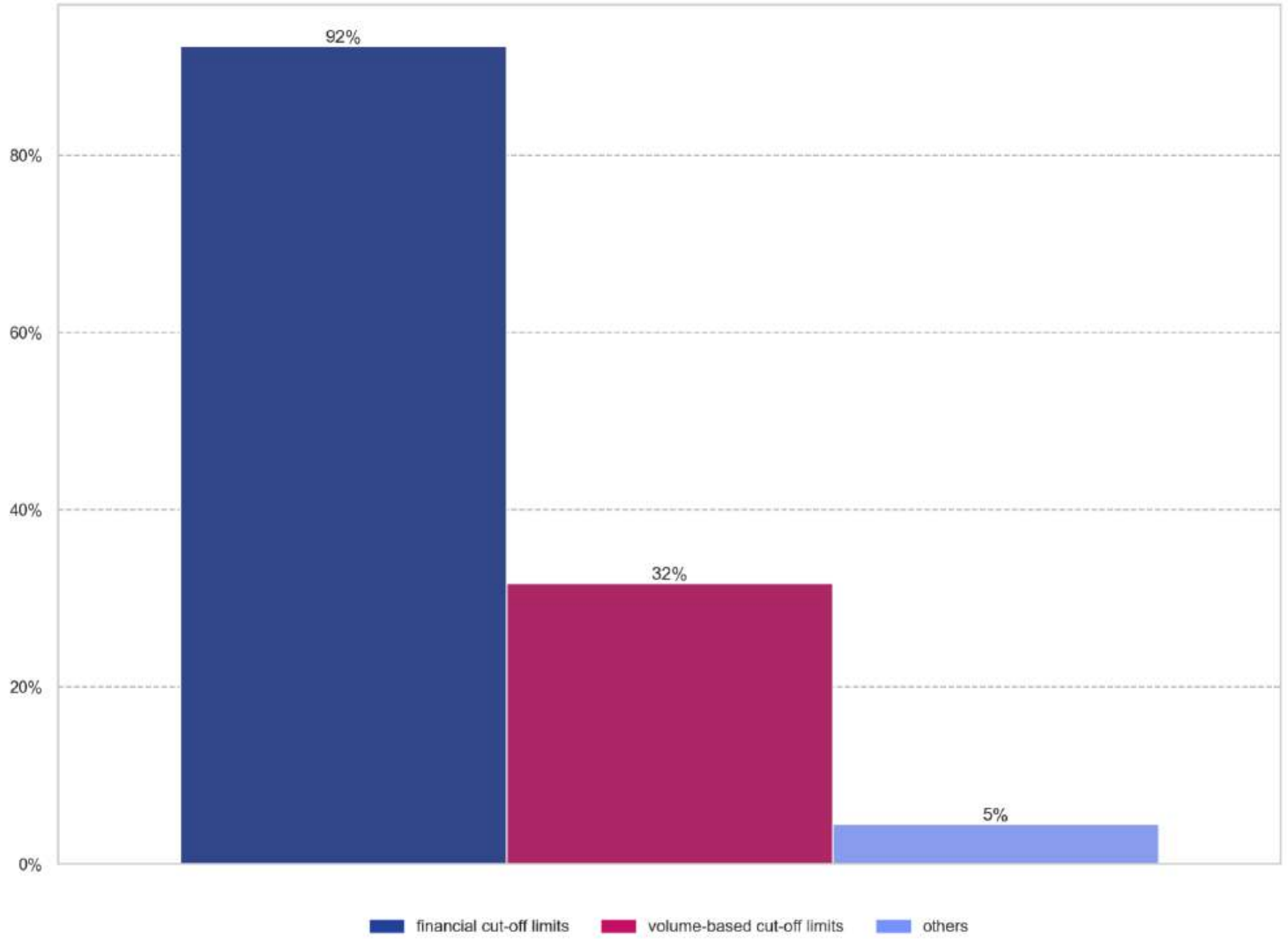


Figure 62 depicts the percentage of roaming providers (MNOs and MVNOs) that offer financial cut-off limits, volume-based cut-off limits or other cut-off limits. Number of respondents from left bar to right: 131, 123, 66.

Figure 63: Percentage of roaming providers which provide different types of information on cut-off limits

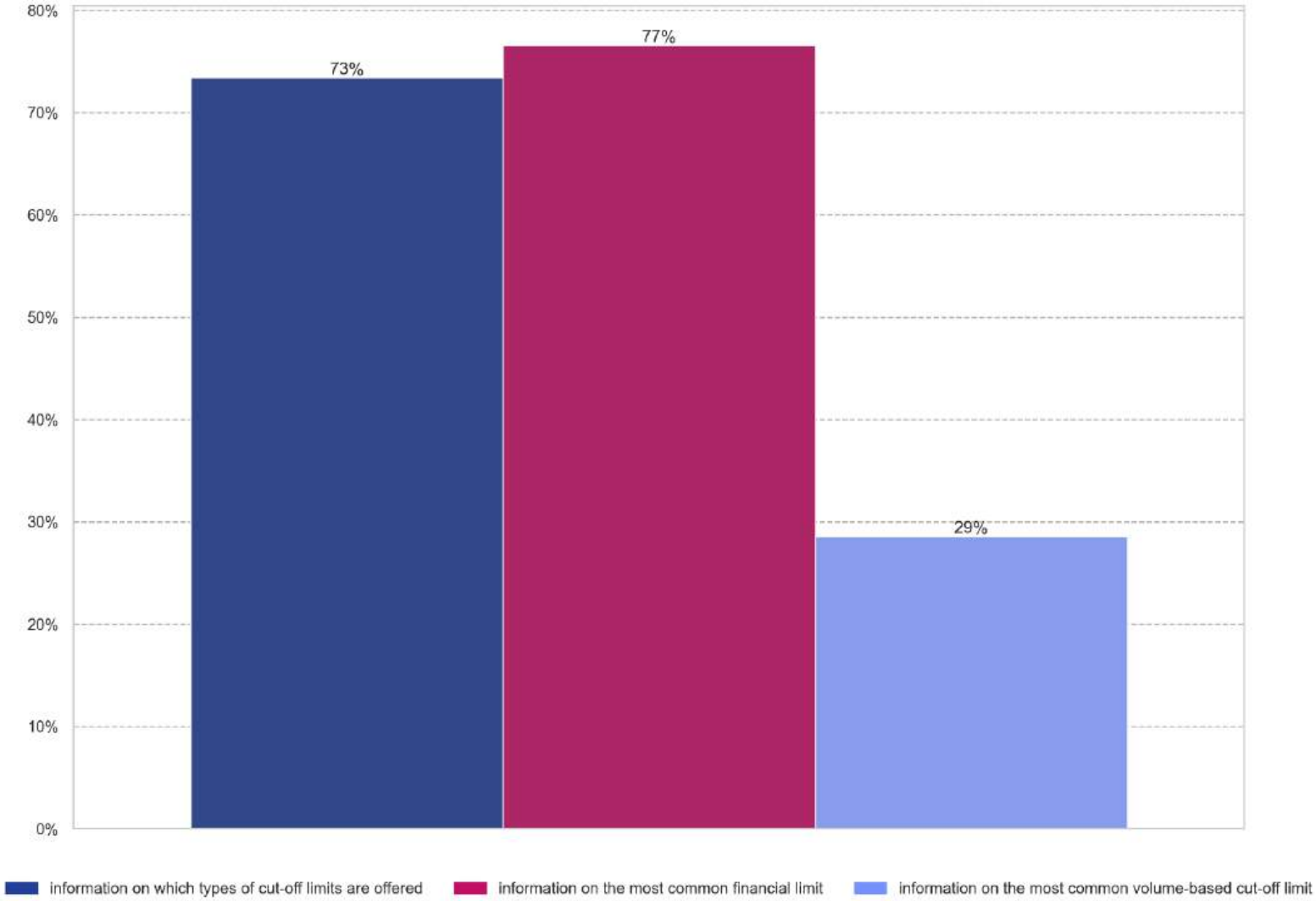


Figure 63 depicts the percentage of roaming providers (MNOs and MVNOs) that provide information on the types of cut-off limits they offer, on the most common financial limit or on the most common volume-based limit. Number of respondents from left bar to right: 128, 124, 119.

Figure 64: Structure of cut-off limits

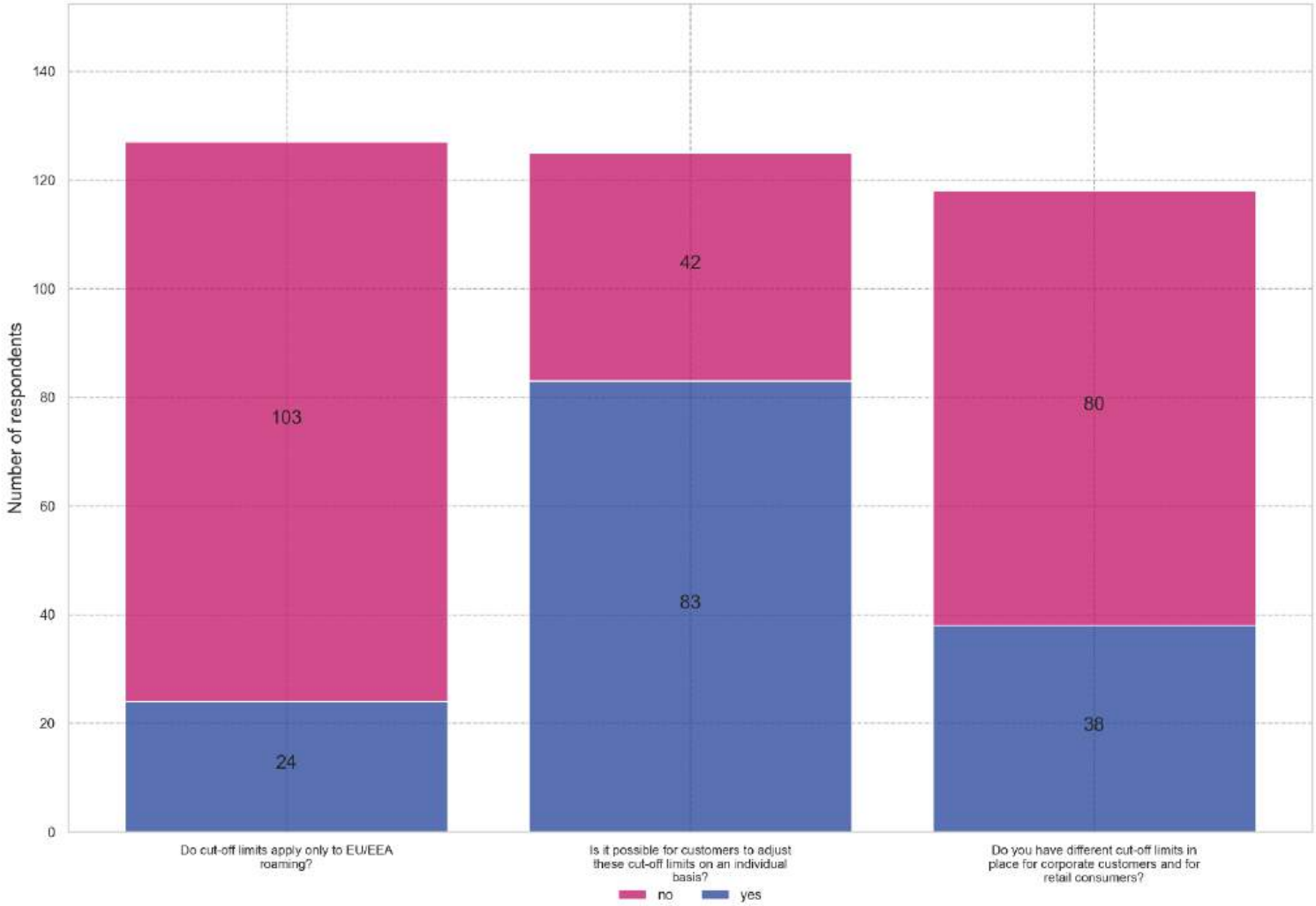


Figure 64 depicts the number of roaming providers (MNOs and MVNOs) that offer cut-off limits, the number of respondents allowing their subscribers to adjust these cut-off limits individually and the number of respondents which have different cut-off limits for corporate customers and retail consumers. Number of respondents from left bar to right: 136, 136, 130 (difference of sum of two bars to total number of respondents is operators that answered “n.a.”).

Figure 65: Charges for roaming in non-terrestrial networks included in the financial limits

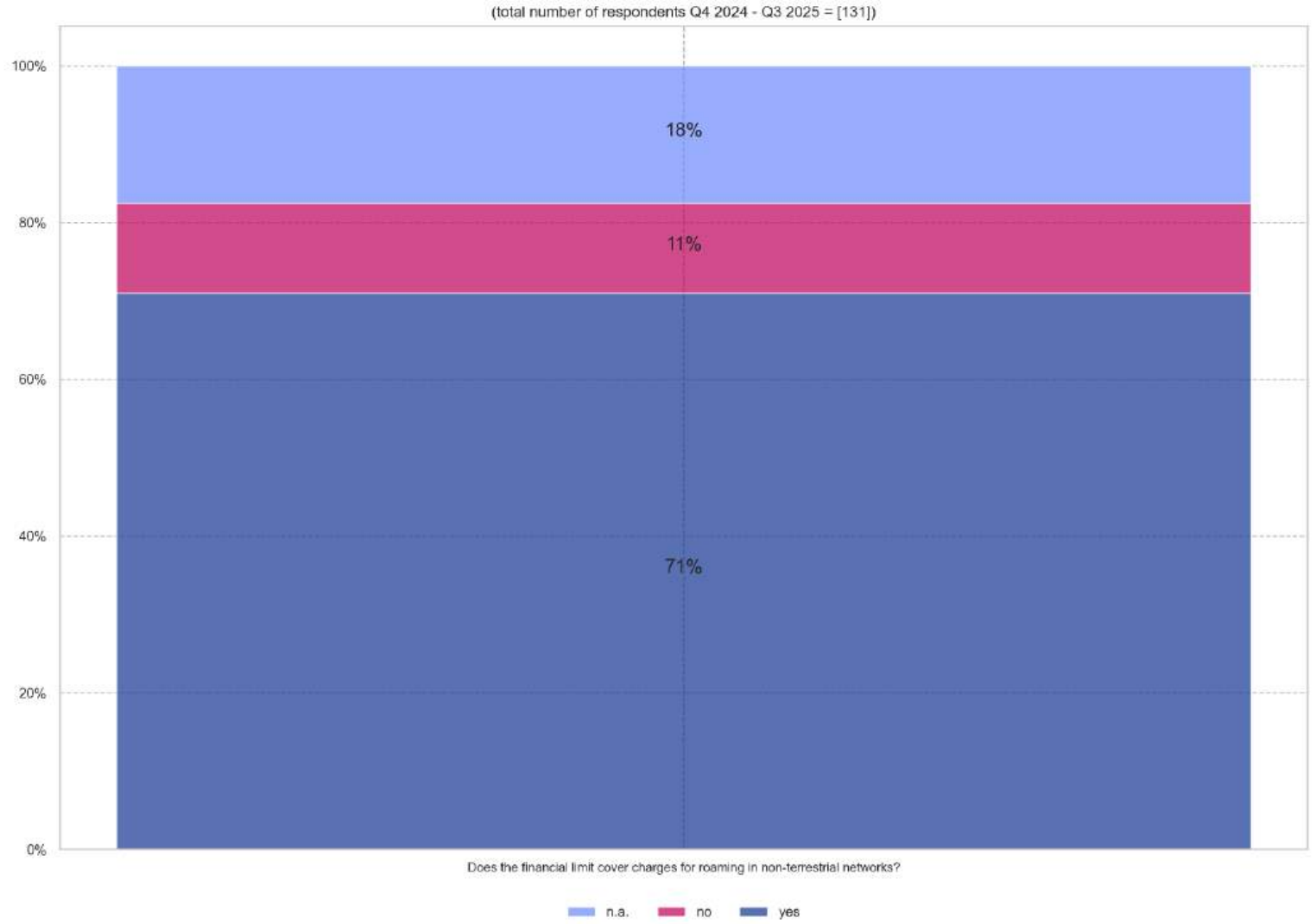


Figure 65 depicts the percentage of roaming providers (MNOs and MVNOs) that include charges for roaming in non-terrestrial networks in the financial limits for roaming.

5.6.8. Non-EU/EEA destinations, inadvertent roaming and non-terrestrial networks

Figure 66: Non-EU/EEA destinations, inadvertent roaming and non-terrestrial networks

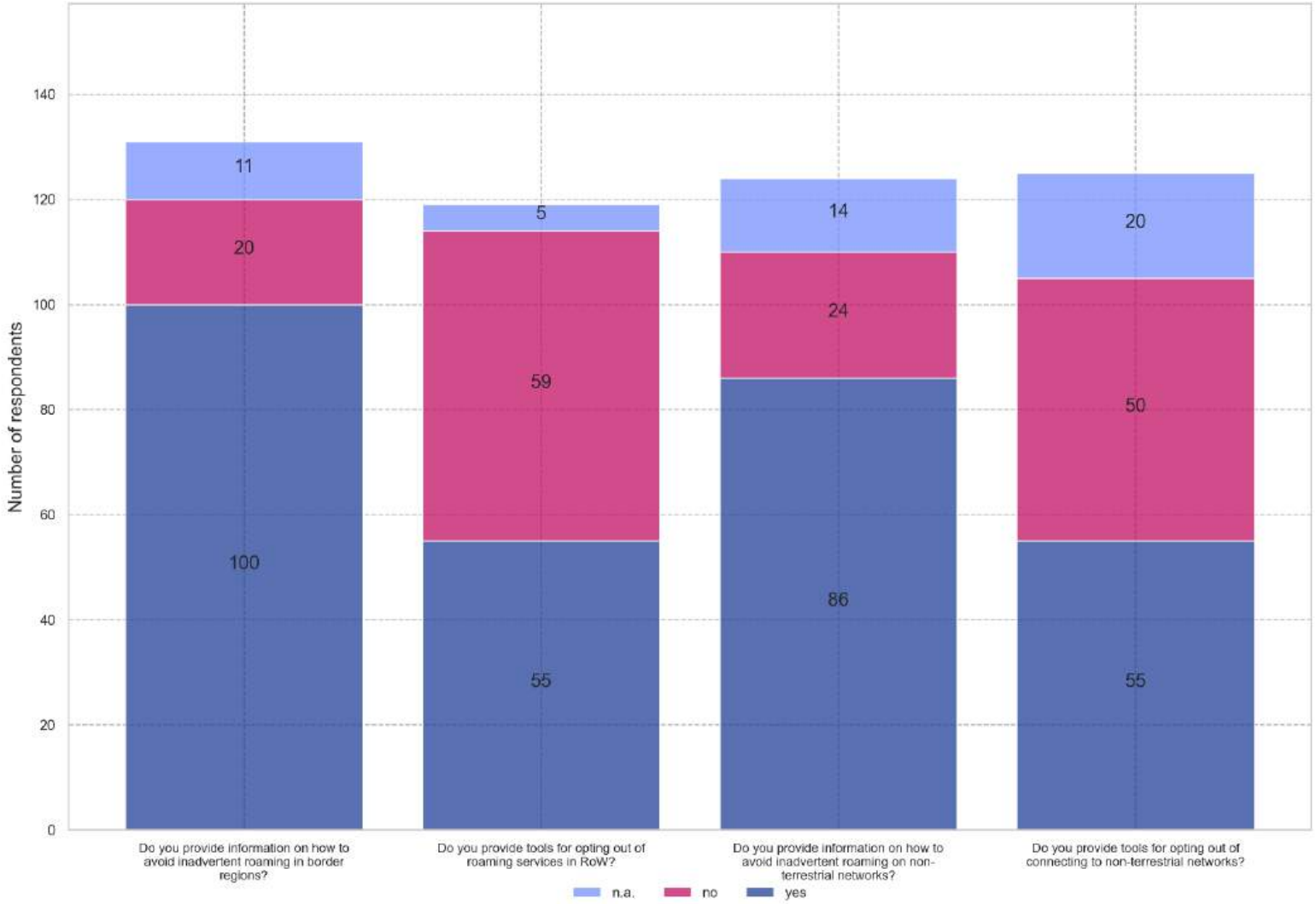


Figure 66 depicts the number of roaming providers (MNOs and MVNOs) that provide information and tools to help customers avoid inadvertent roaming outside EU/EEA and via non-terrestrial networks. Number of respondents from left bar to right: 131, 119, 124, 125.

Figure 67: Measures implemented to protect consumers from paying for inadvertent roaming in the EU/EEA

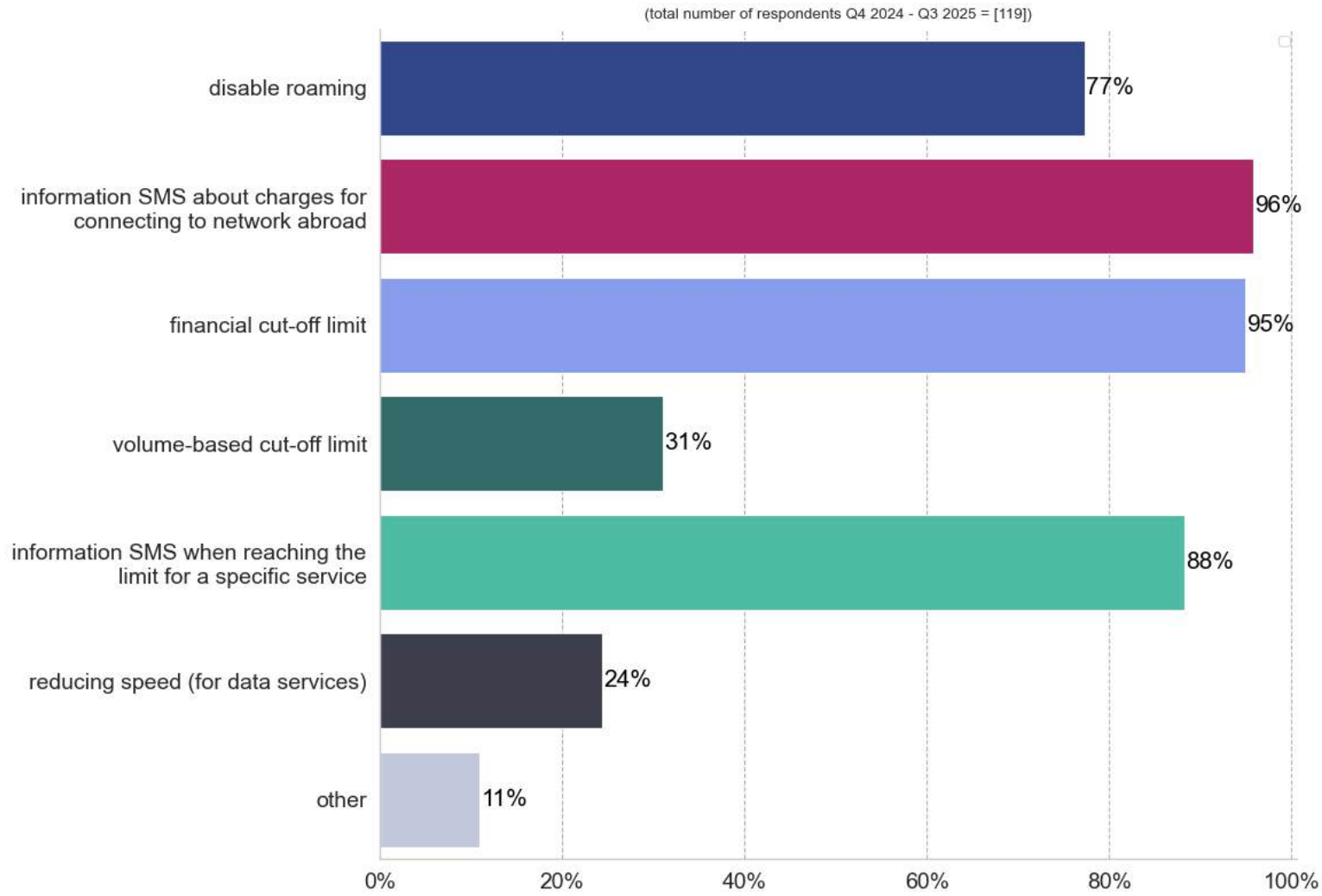


Figure 67 depicts the percentage of roaming providers (MNOs and MVNOs) that have implemented different types of measures to protect consumers from paying for inadvertent roaming in the EU/EEA. These measures include information SMS about charges or limits, volume-based or financial cut-off limits, the possibility to disable roaming, reduced speed for data services and other measures.

5.6.9. Welcome SMS

Figure 68: Share of providers offering different types of information in the EU/EEA Welcome SMS

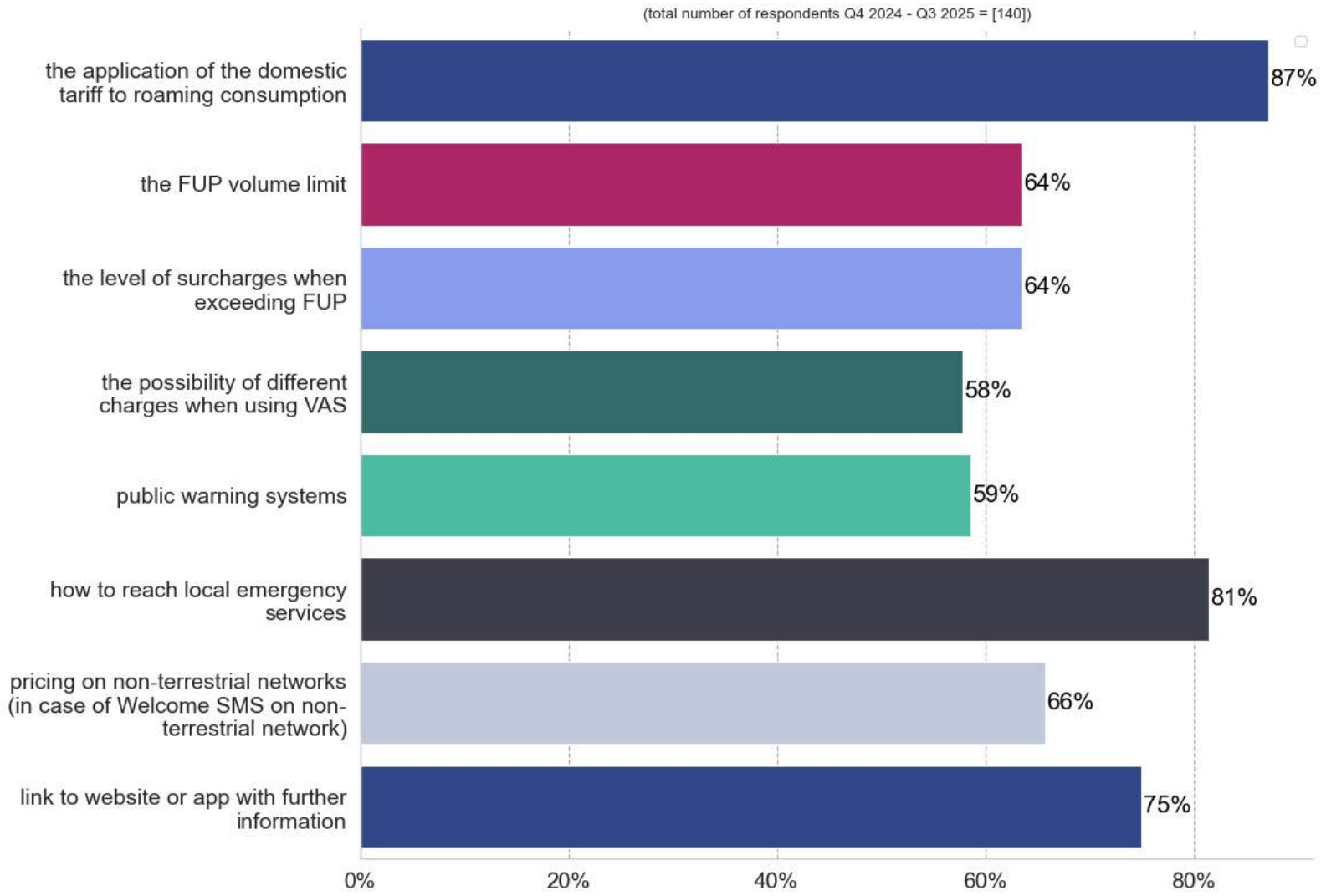


Figure 68 depicts the percentage of roaming providers (MNOs and MVNOs) offering different types of information in the EU/EEA Welcome SMS, e.g. related to charges or accessing emergency services.

Figure 69: Share of providers offering different types of information in the RoW Welcome SMS

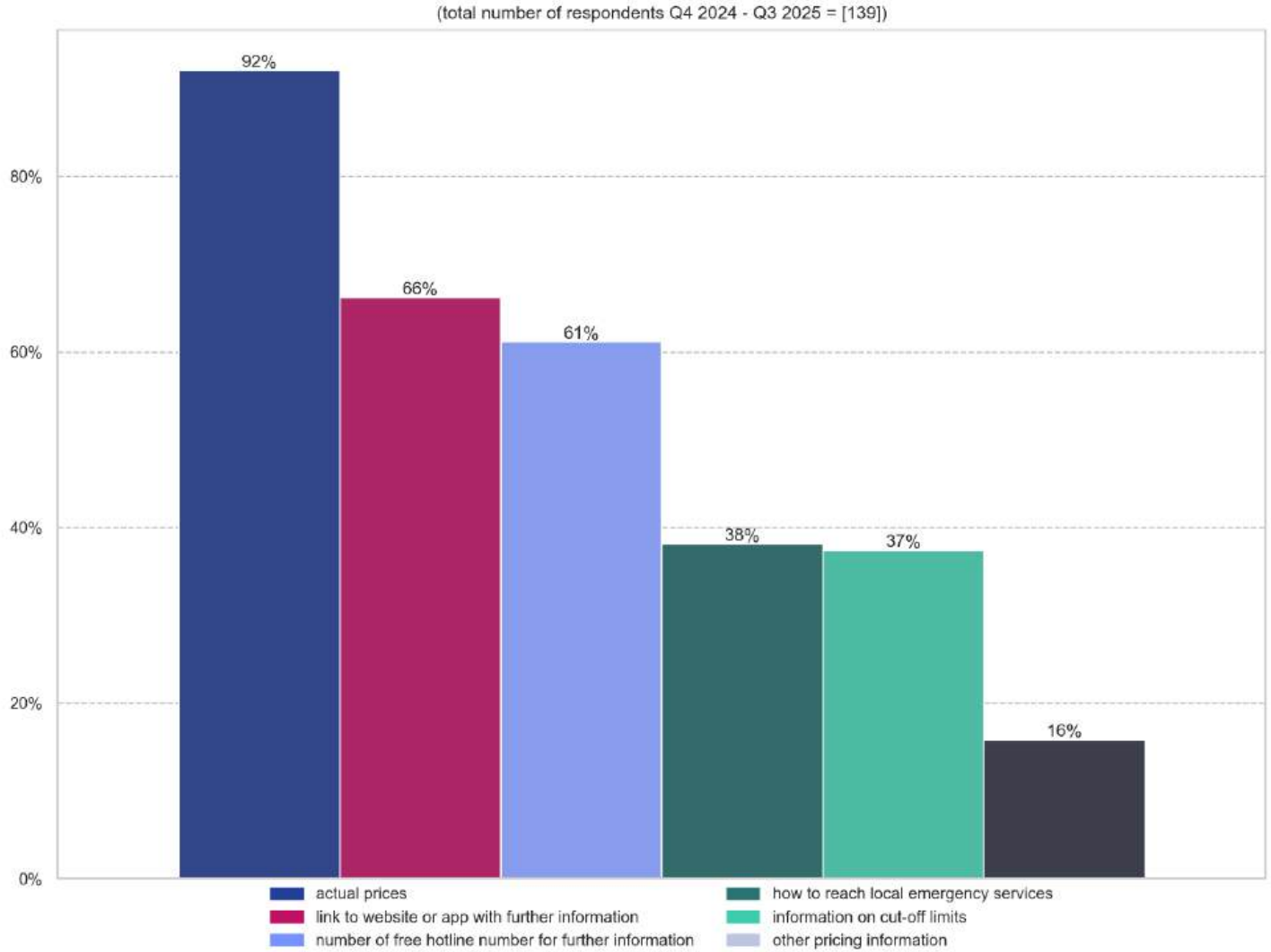


Figure 69 depicts the percentage of roaming providers (MNOs and MVNOs) offering different types of information in the RoW Welcome SMS, e.g. related to charges, the possibility to obtain further information, or emergency services.

5.6.10. Transparency of wholesale offers regarding QoS

Figure 70: Problems of access seekers with gaining access to network technologies for roaming offers

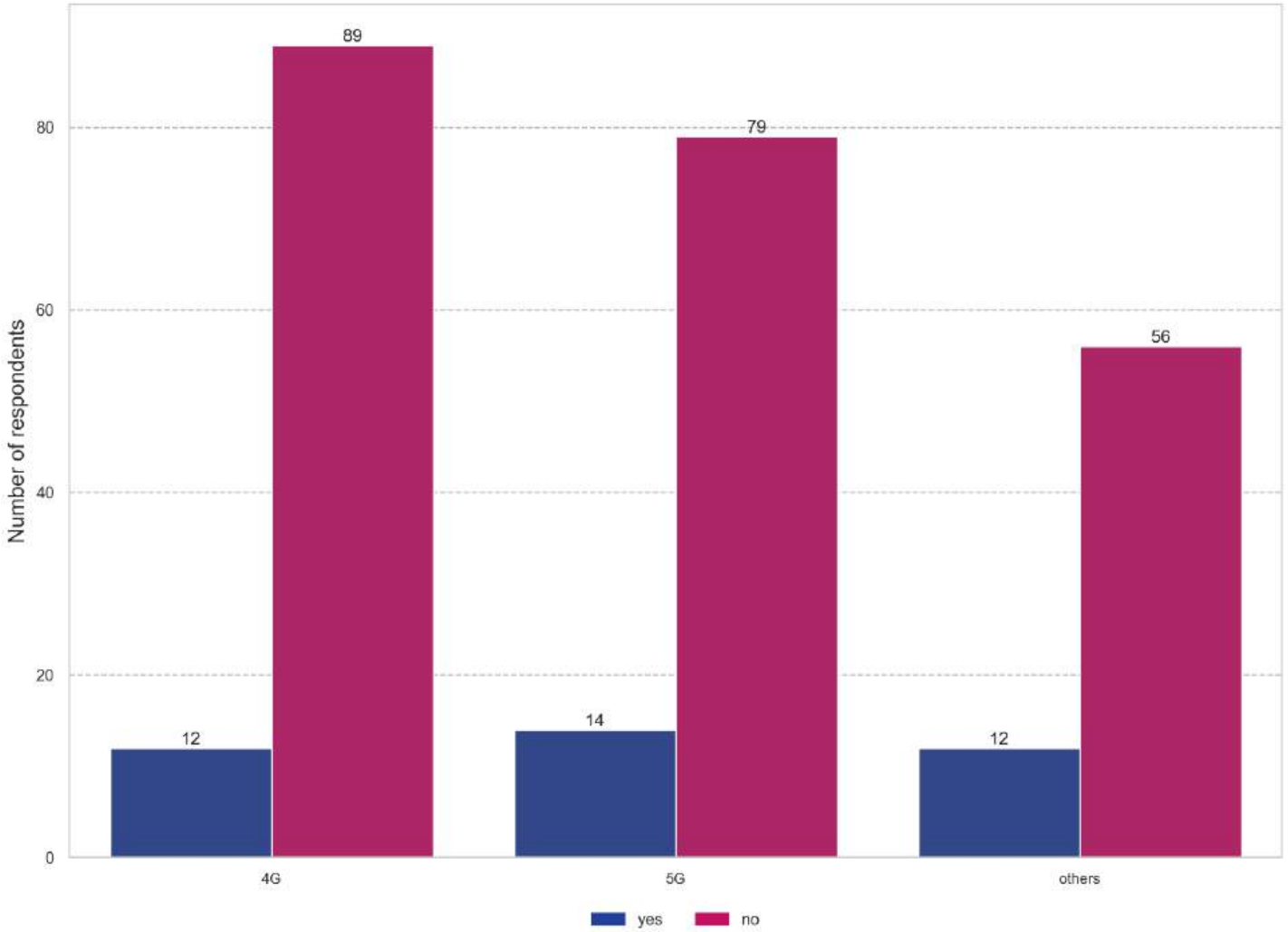


Figure 70 depicts the number of roaming providers (MNOs and MVNOs) that have encountered problems with gaining access to different network technologies (5G, 4G or others) for roaming offers. Number of respondents from left set of bars to right: 111, 111, 88 (difference of sum of two bars to total number of respondents is operators that answered “n.a.”).

Figure 71: Implementation problems of access seekers with network technologies for roaming offers

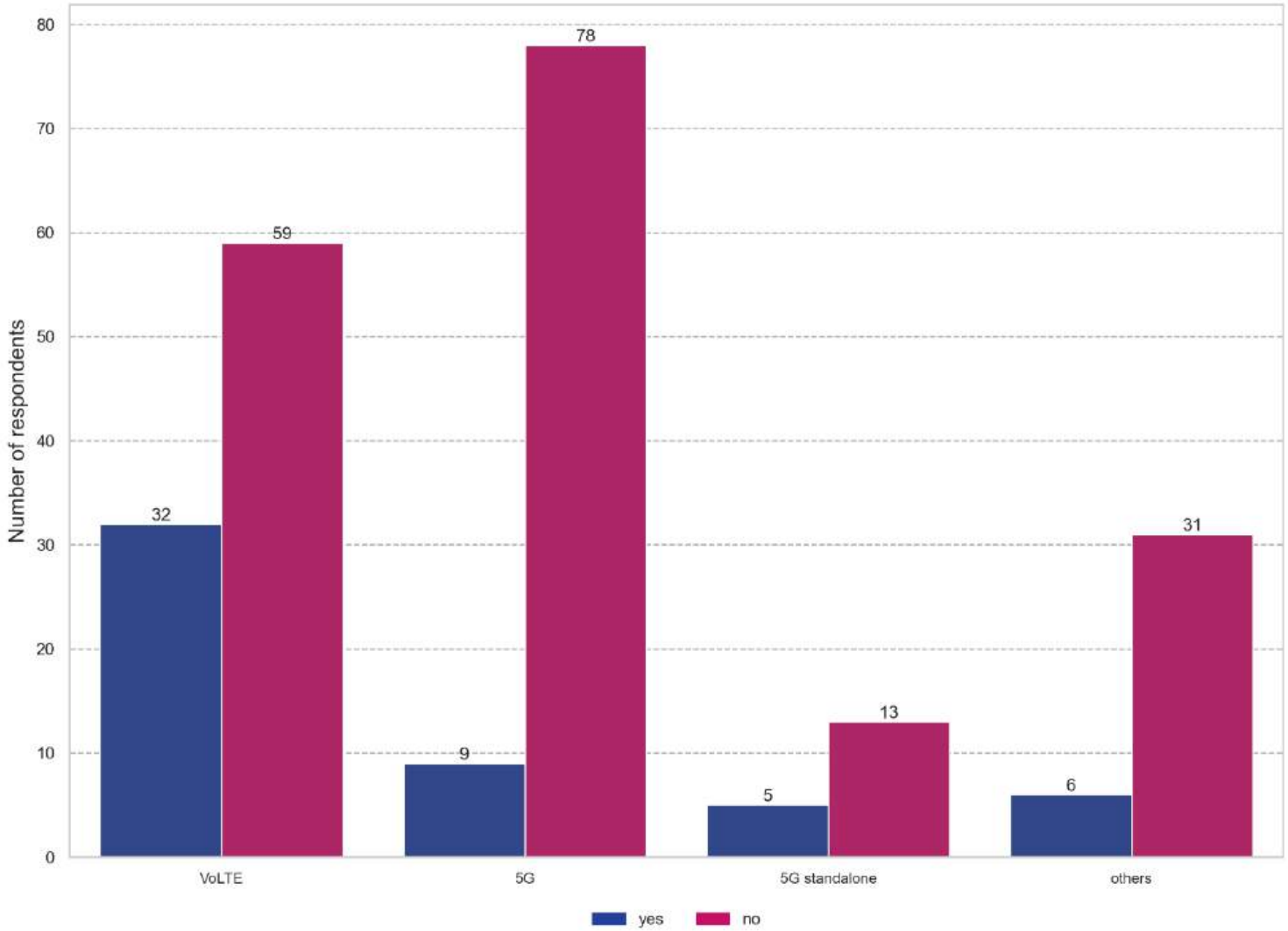


Figure 71 depicts the number of roaming providers (MNOs and MVNOs) that have encountered implementation problems with VoLTE, 5G, 5G standalone, and other network technologies. Number of respondents from left bar to right: 110, 109, 108, 78 (difference of sum of two bars to total number of respondents is operators that answered “n.a.”).

Figure 72: Number of respondents with a certain percentage of EU/EEA outbound roaming agreements including operational VoLTE or VoNR services

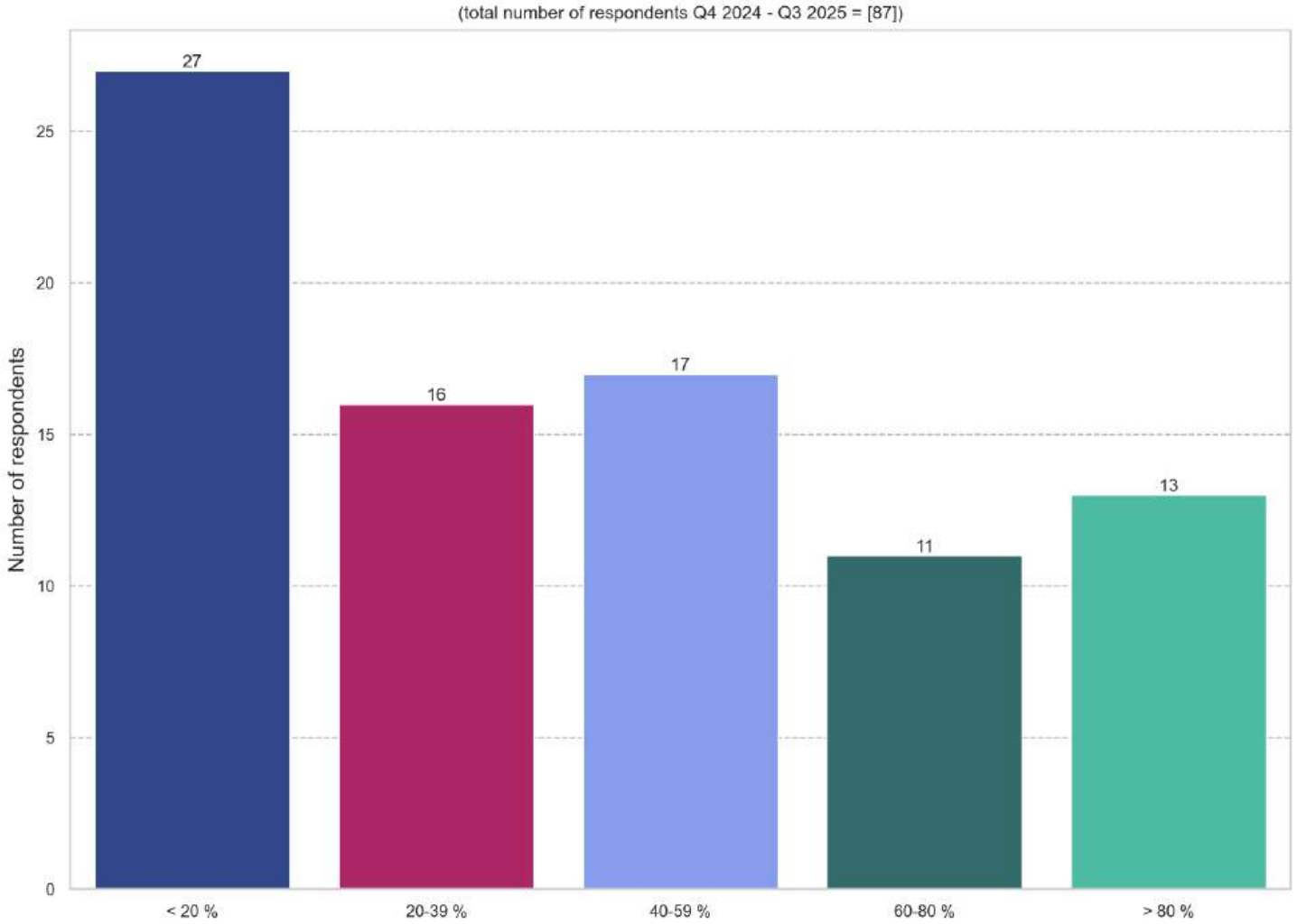


Figure 72 depicts the number of roaming providers (MNOs and MVNOs) whose outbound roaming agreements include operational VoLTE and VoNR services up to a certain threshold (< 20%, 20-39%, 40-59%, 60-80%, > 80%).

5.6.11. Agreements on pricing

Figure 73: Agreements on technology and pricing

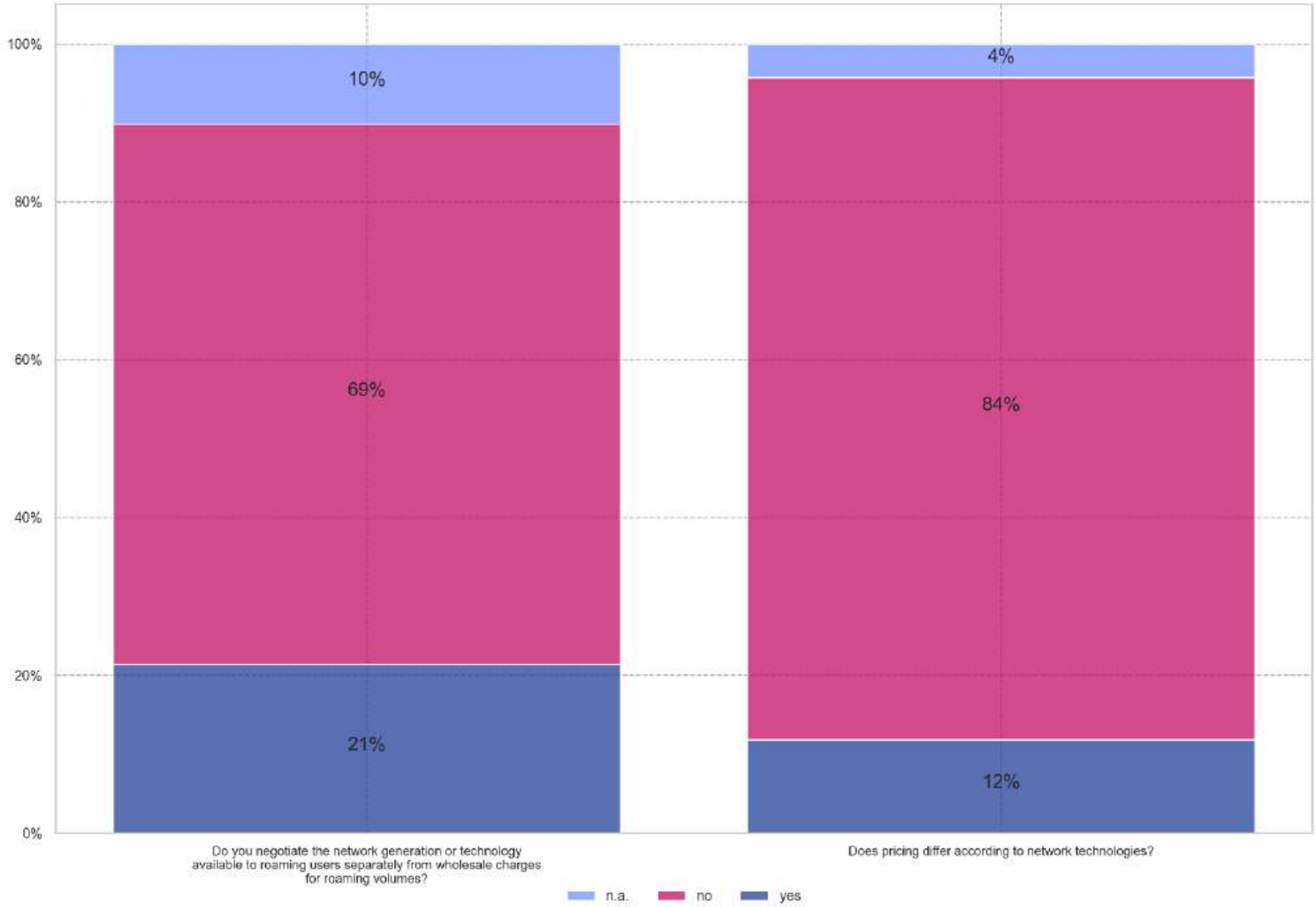


Figure 73 depicts the percentage of roaming providers (MNOs and MVNOs) that negotiate the network generation and technology agreements separately from wholesale charges agreement for roaming volumes. It also represents the percentage of operators that indicate differences in pricing according to the network technology. Number of respondents from left bar to right: 89, 93.

Figure 74: Mechanisms used for reaching agreements on roaming prices

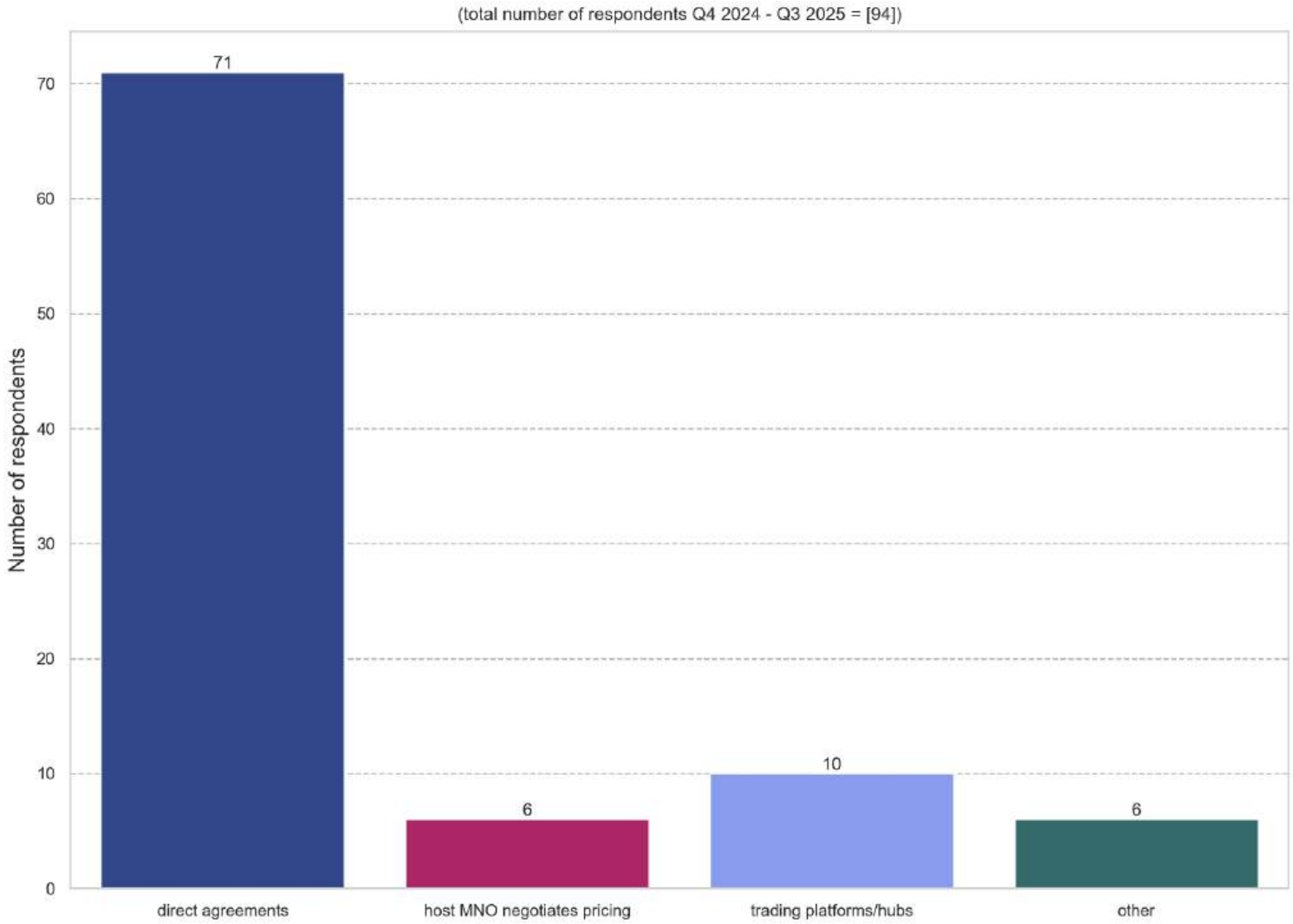


Figure 74 depicts the number of roaming providers (MNOs and MVNOs) that use direct agreements, trading platforms/hubs or other mechanisms, or rely on their host MNO to reach agreements on roaming prices.

Figure 75: Other pricing schemes used by respondents

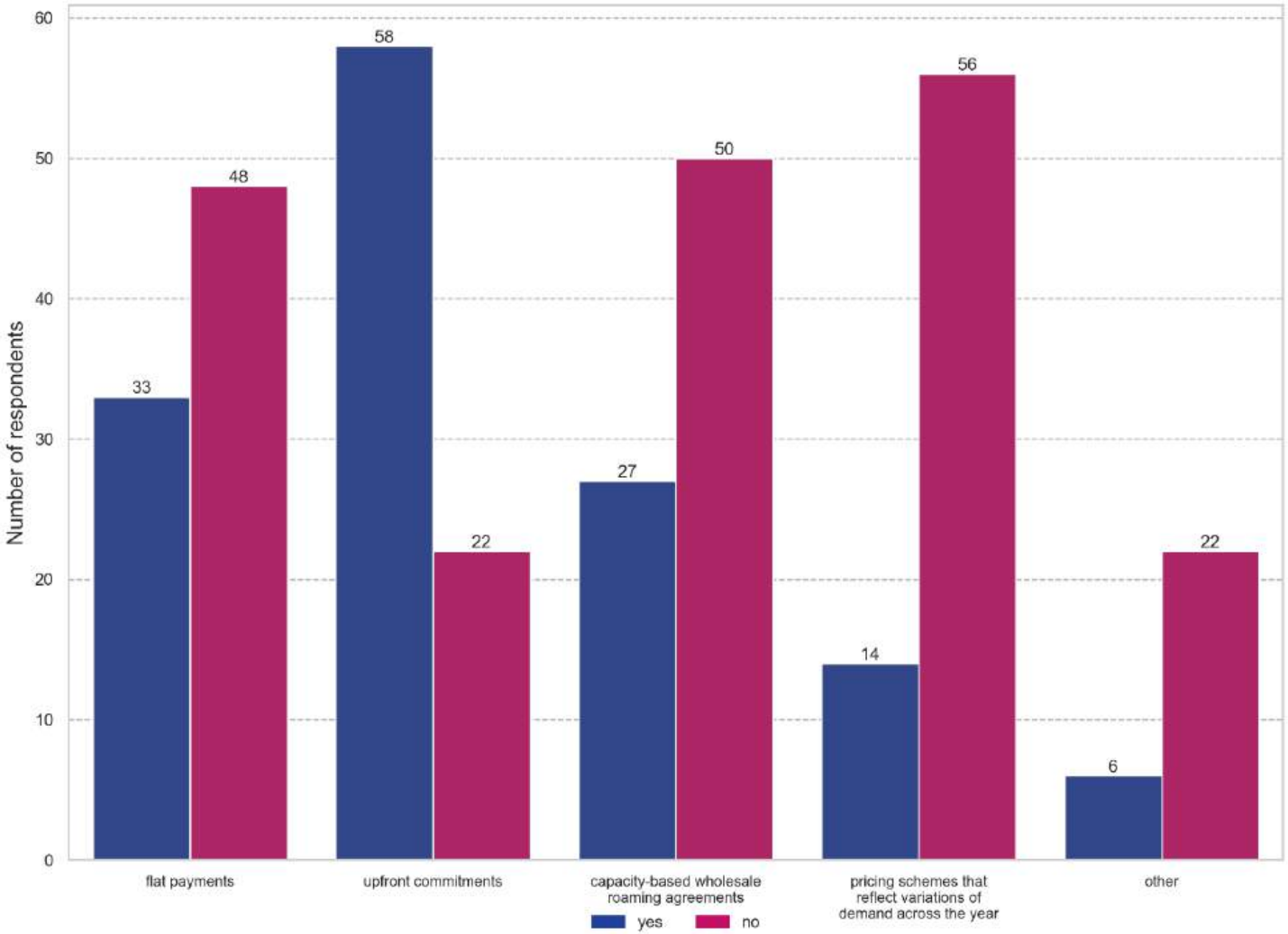


Figure 75 depicts the number of roaming providers (MNOs and MVNOs) that use different types of pricing schemes. This includes flat payments, upfront commitments, capacity-based wholesale roaming agreements, pricing schemes that reflect variations of demand across the year, or others. Number of respondents from left bar to right: 91, 90, 88, 85, 56 (difference of sum of two bars to total number of respondents is operators that answered “n.a.”).

Figure 76: Obstacles encountered at a wholesale level

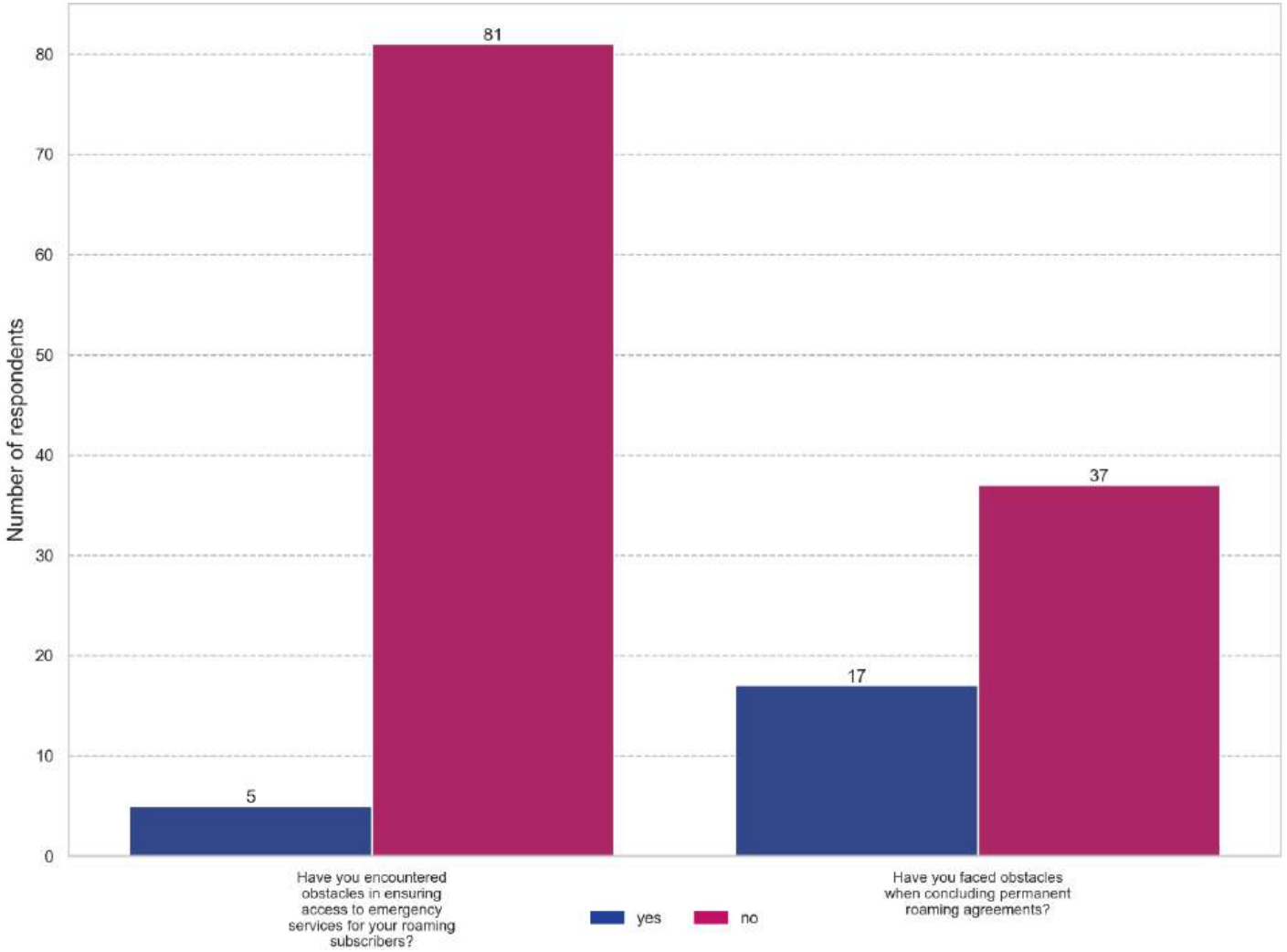


Figure 76 depicts the number of roaming providers (MNOs and MVNOs) that have encountered obstacles in ensuring access to emergency services for their subscribers as well as when concluding permanent roaming agreements. Number of respondents from left set of bars to right: 93, 90 (difference of sum of two bars to total number of respondents is operators that answered “n.a.”).

Figure 77: Special wholesale contracts/agreements for services provided by connected objects/devices

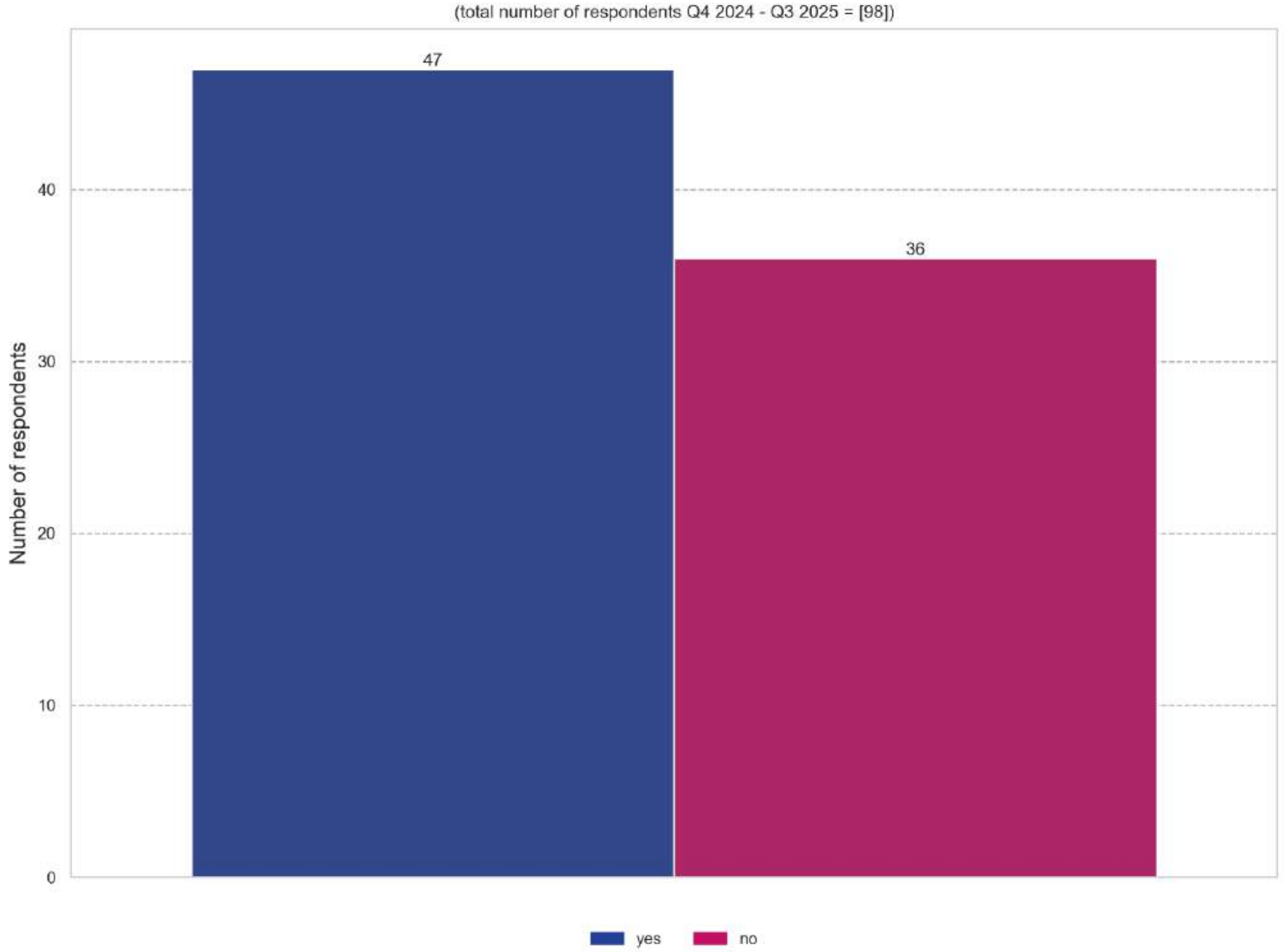


Figure 77 depicts the number of roaming providers (MNOs and MVNOs) that have special wholesale contracts/agreements for services provided by connected objects/devices.

5.6.12. Applications for sustainability surcharges

Figure 78: Applications for sustainability surcharges received and granted by NRAs, (total number of respondents Q4 2024 – Q3 2025 = 29)

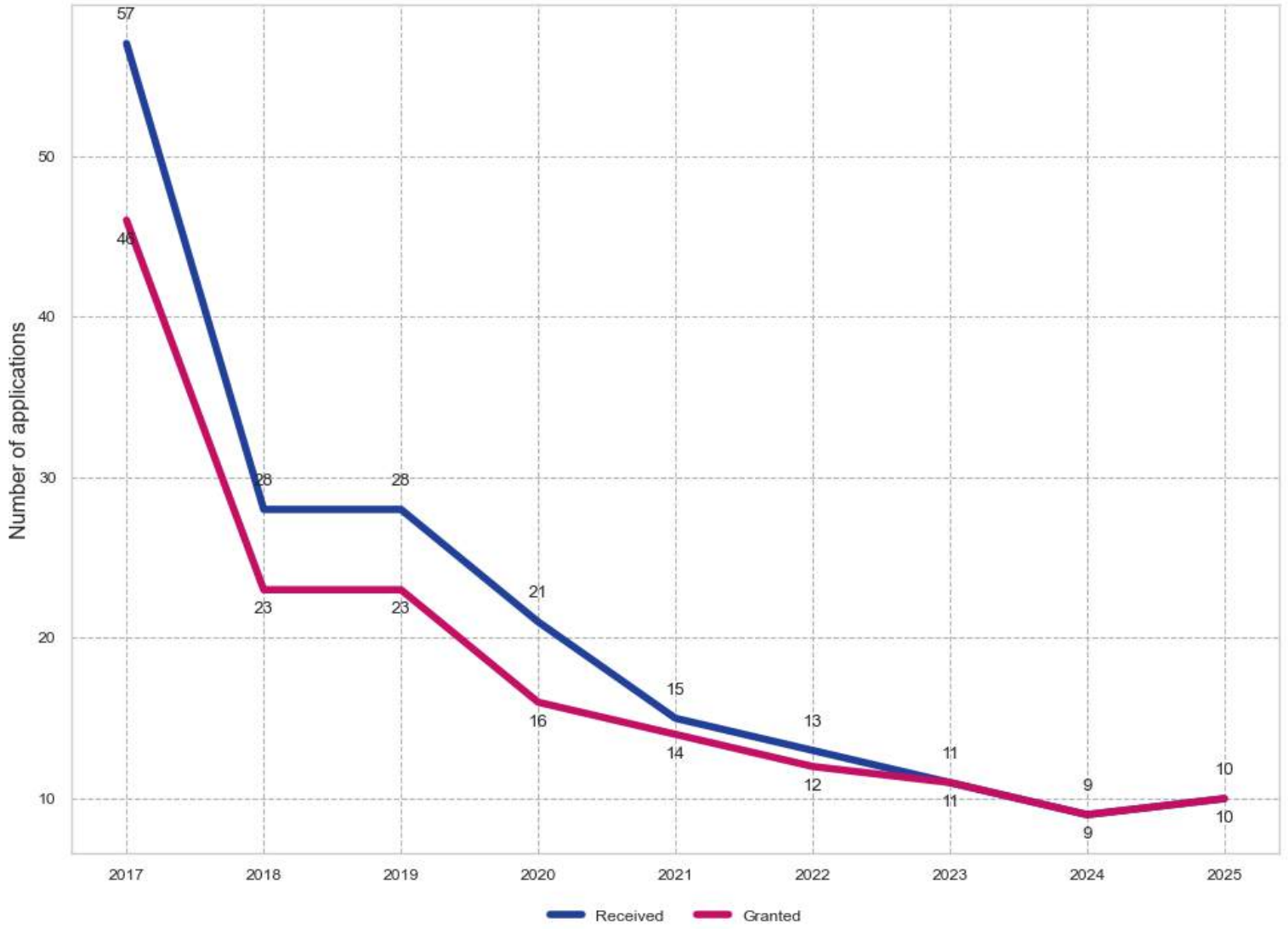


Figure 78 depicts the number of applications for sustainability surcharges received and granted by NRAs over the period between 2017 and 2025.

5.6.13. Complaints on transparency issues received by NRAs

Figure 79: Number of complaints received by NRAs per country (total number of respondents Q4 2024 – Q3 2025 = 29)

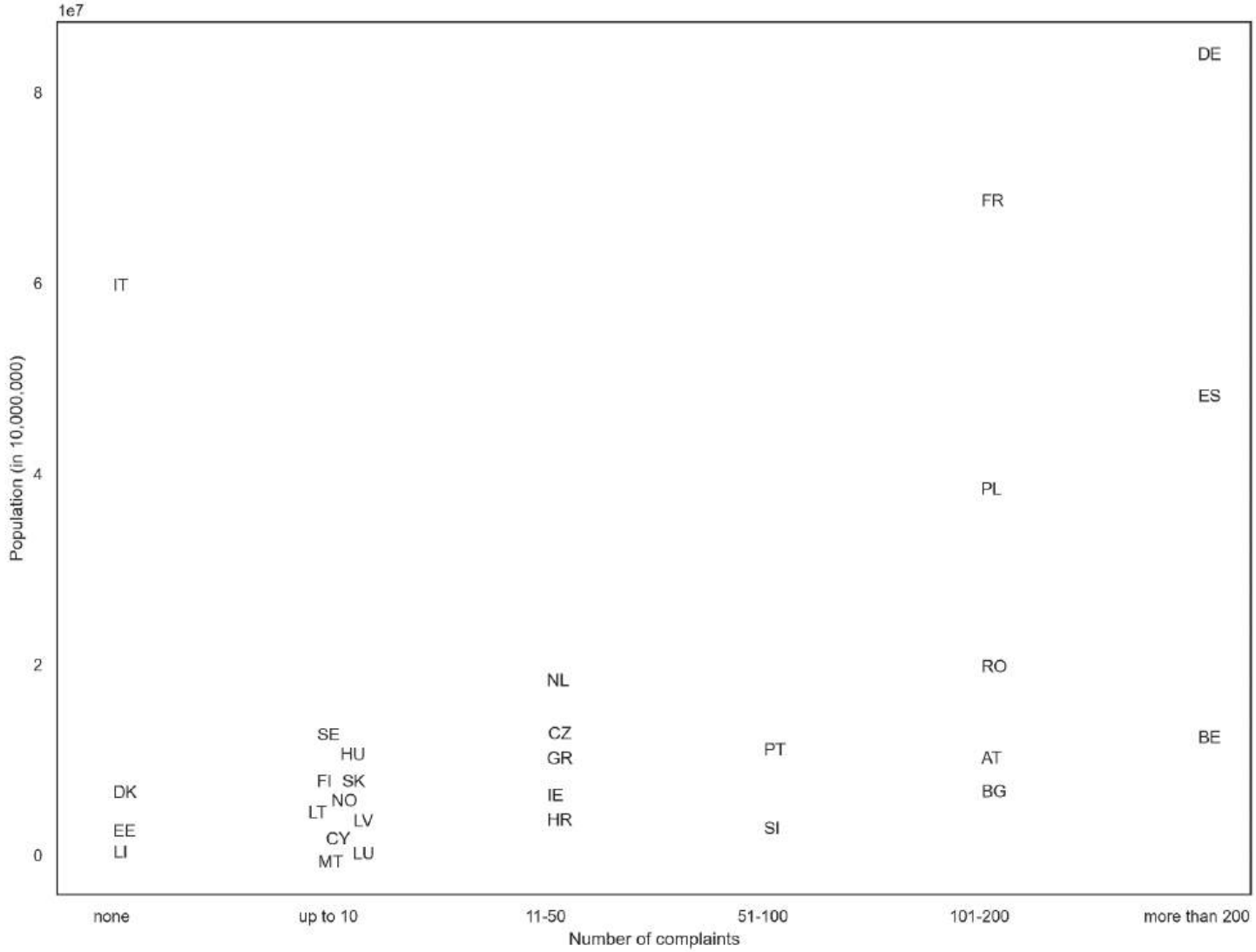


Figure 79 shows which NRAs received complaints within a certain range during the reporting period Q4 2024 – Q3 2025.

Figure 80: Number of NRAs that received complaints from end users on specific issues (total number of respondents Q4 2024 – Q3 2025 = 24)

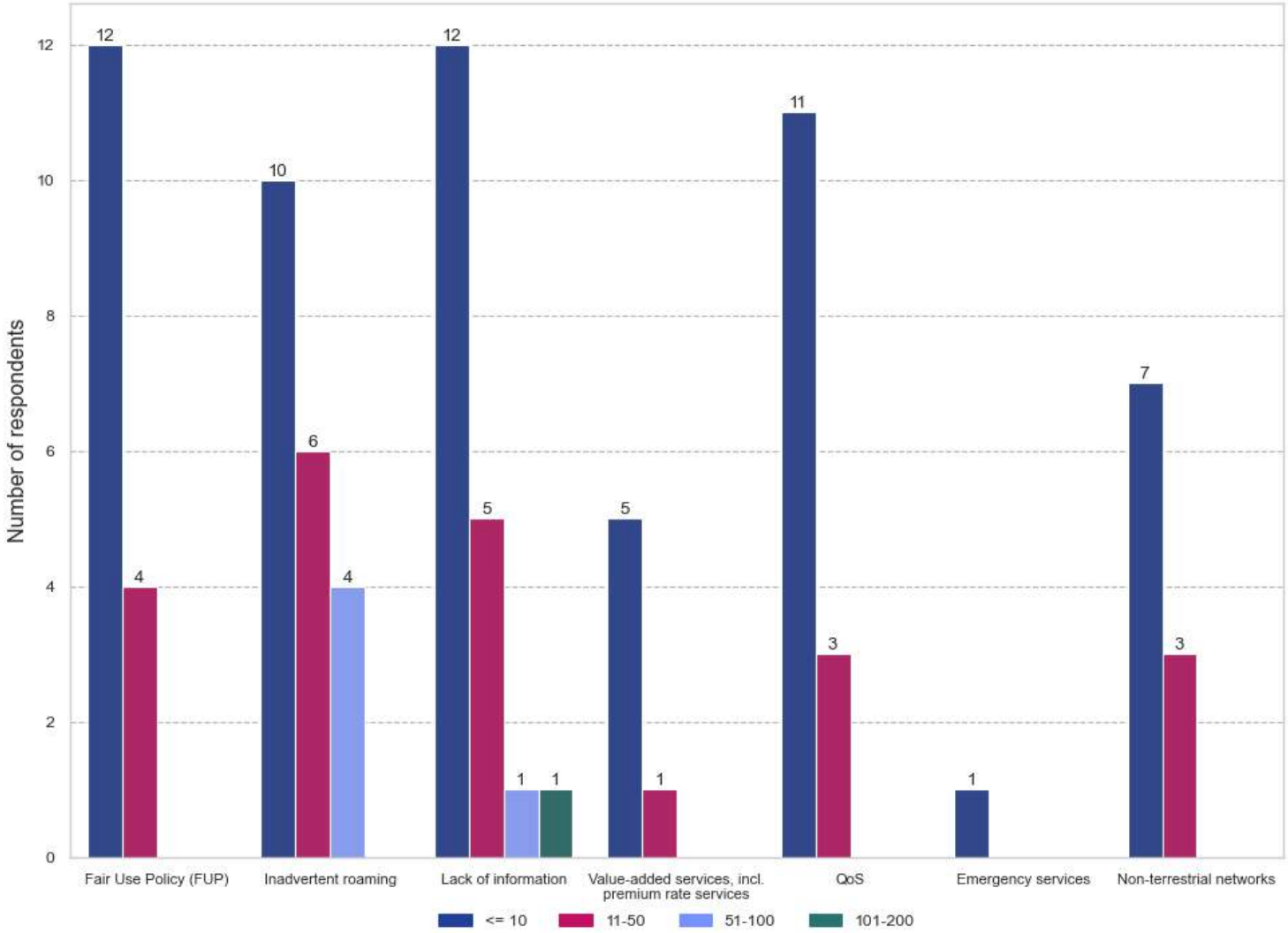


Figure 80 depicts the number of NRAs that received complaints on different issues within a certain range (up to 10 complaints, between 11-50 complaints, between 51-100 complaints or between 101-200 complaints).

Figure 81: Complaints from end users received by NRAs regarding FUP related issues (total number of respondents Q4 2024 – Q3 2025 = 23)

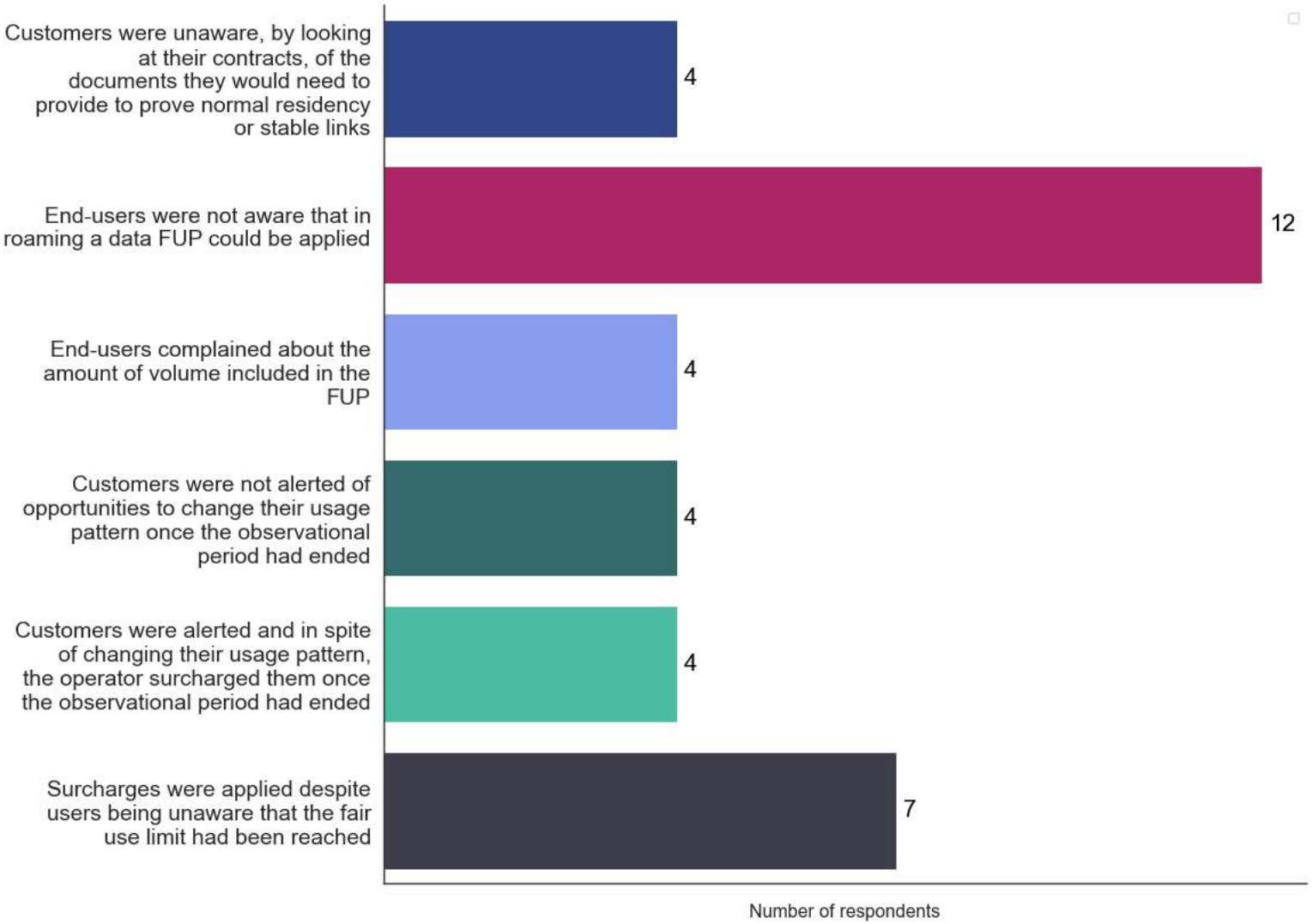


Figure 81 depicts the number of NRAs that received complaints on different FUP related issues.

Figure 82: Complaints from end users received by NRAs regarding inadvertent roaming (total number of respondents Q4 2024 – Q3 2025 = 26)

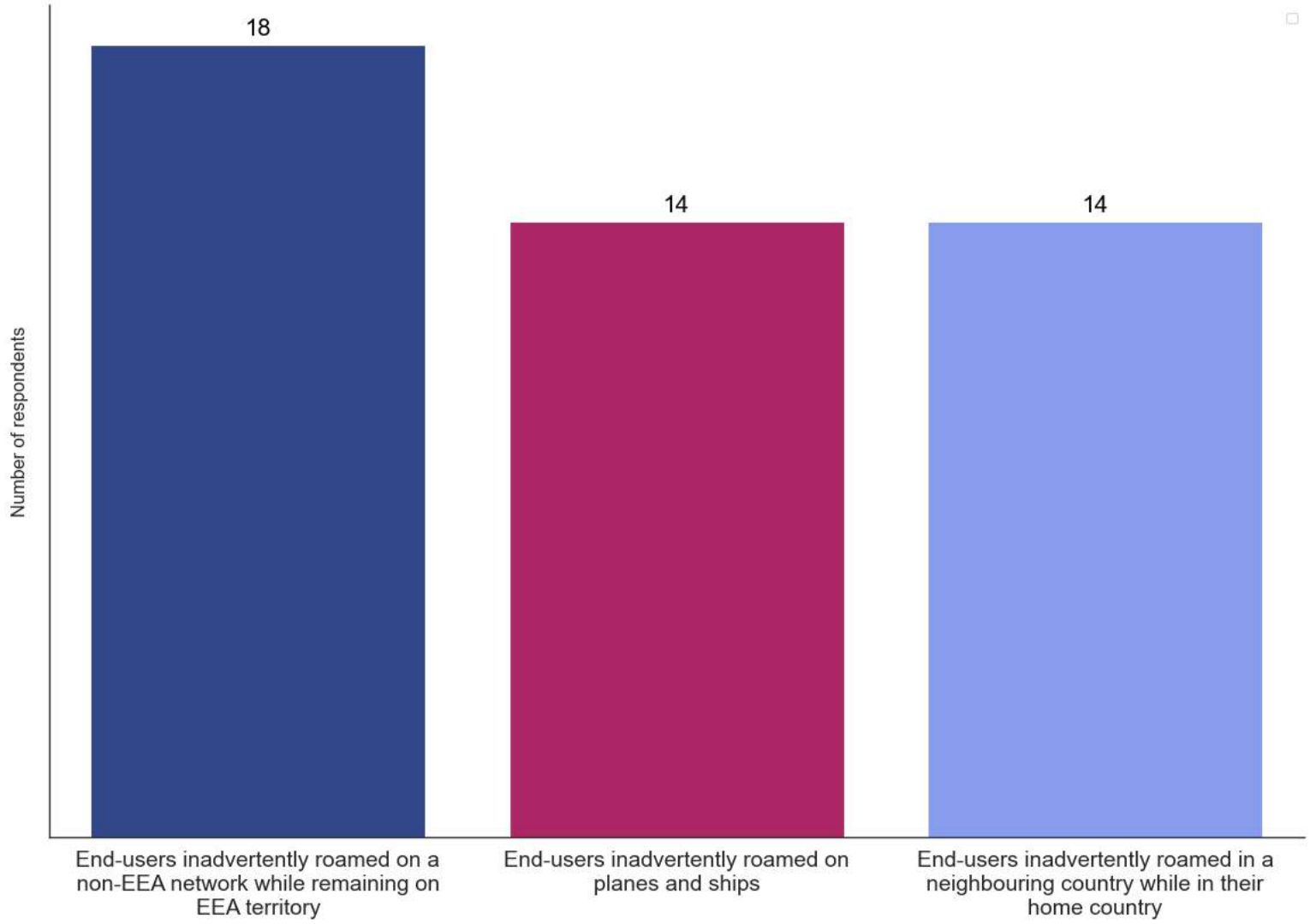


Figure 82 depicts the number of NRAs that received complaints regarding inadvertent roaming

Figure 83: Complaints from end users received by NRAs regarding a lack of information about tariffs and conditions (total number of respondents Q4 2024 – Q3 2025 = 25)

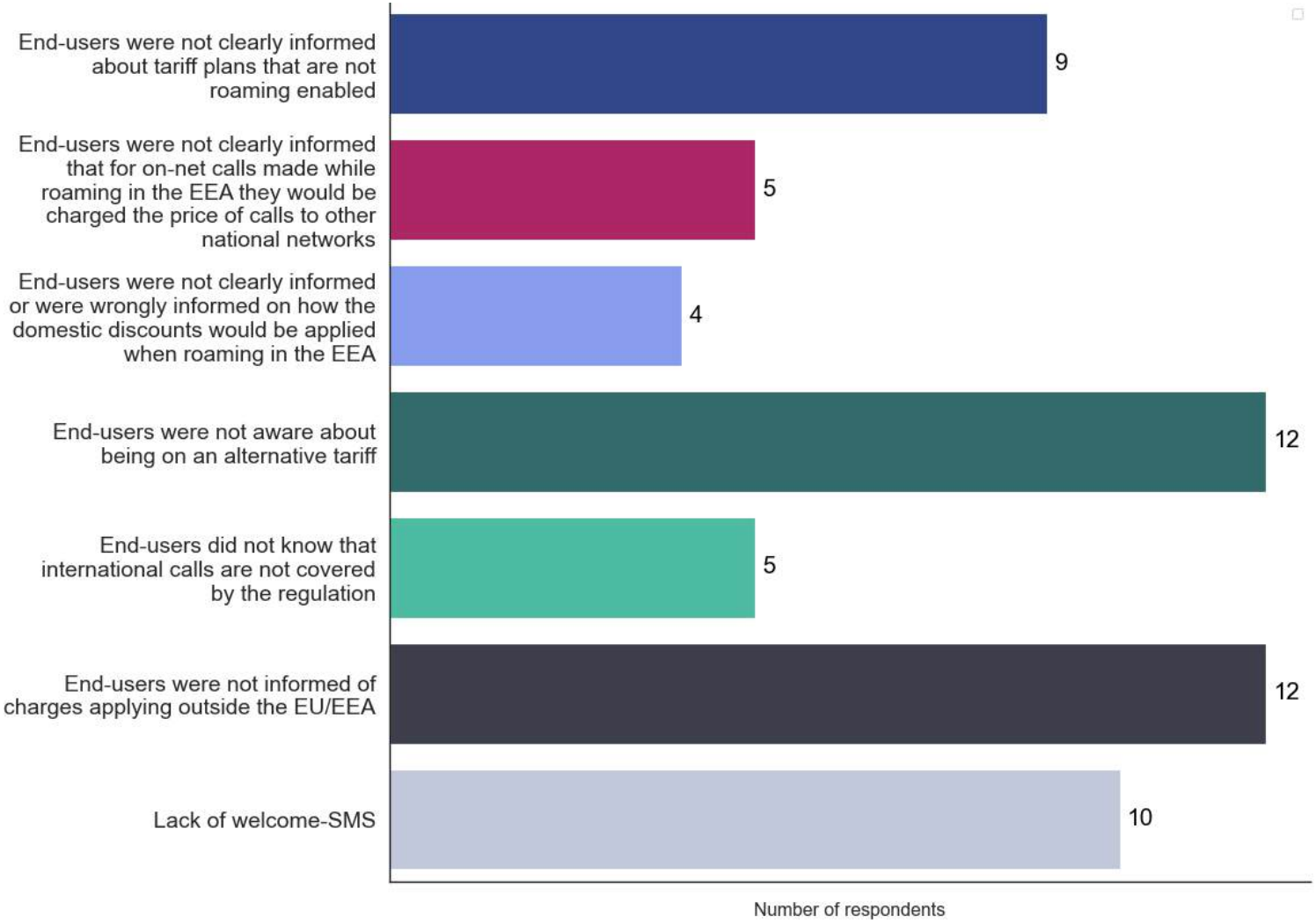


Figure 83 depicts the number of NRAs that received complaints regarding a lack of information about tariffs and conditions.

Figure 84: Complaints from end users received by NRAs regarding the application of RLAH tariffs (total number of respondents Q4 2024 – Q3 2025 = 23)

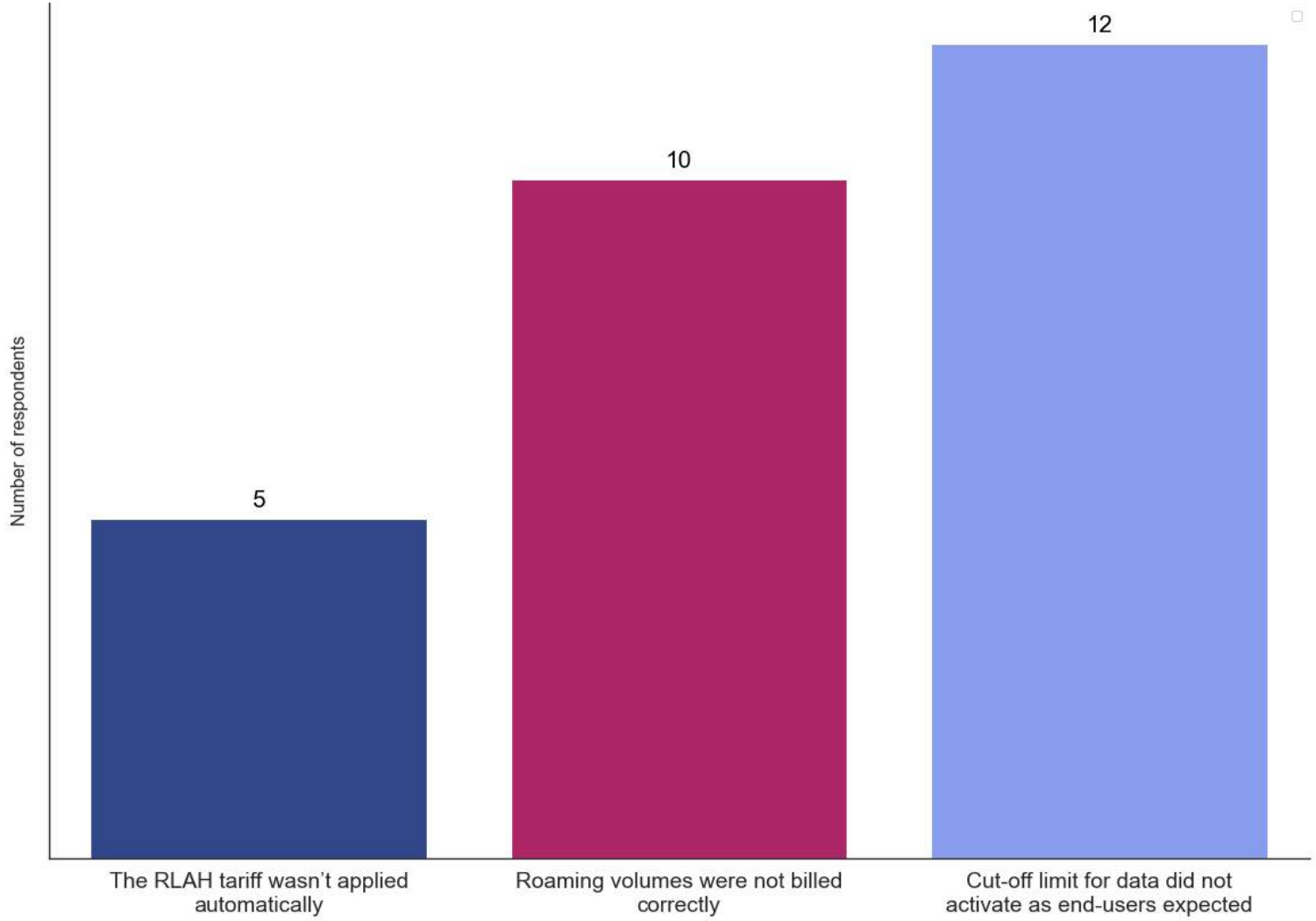


Figure 84 depicts the number of NRAs that received complaints regarding the application of RLAH tariffs.

Figure 85: Complaints from end users received by NRAs regarding VAS (total number of respondents Q4 2024 – Q3 2025 = 23)

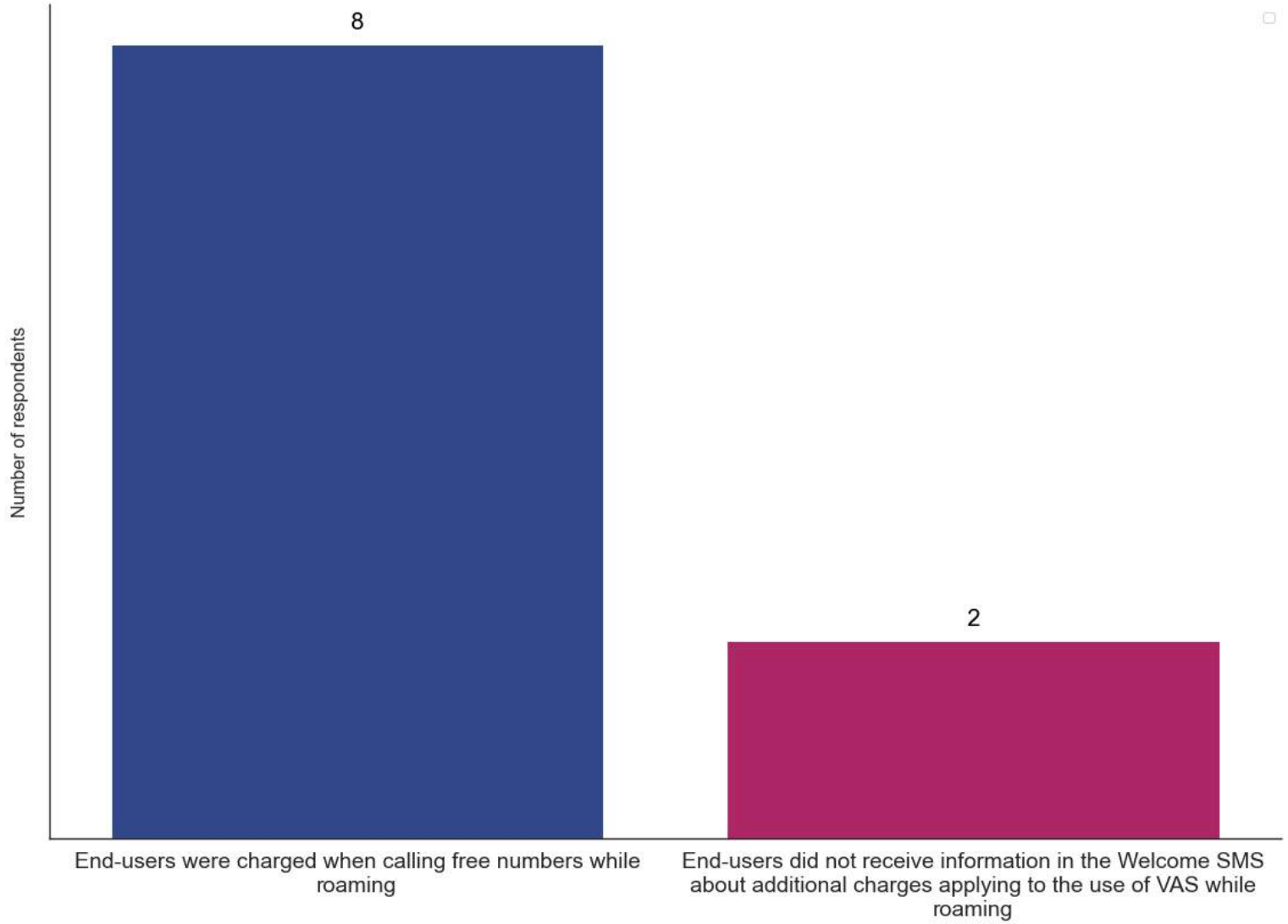


Figure 85 depicts the number of NRAs that received complaints regarding Value Added Services (VAS).

Figure 86: Complaints from end users received by NRAs regarding roaming on non-terrestrial networks (total number of respondents Q4 2024 – Q3 2025 = 24)

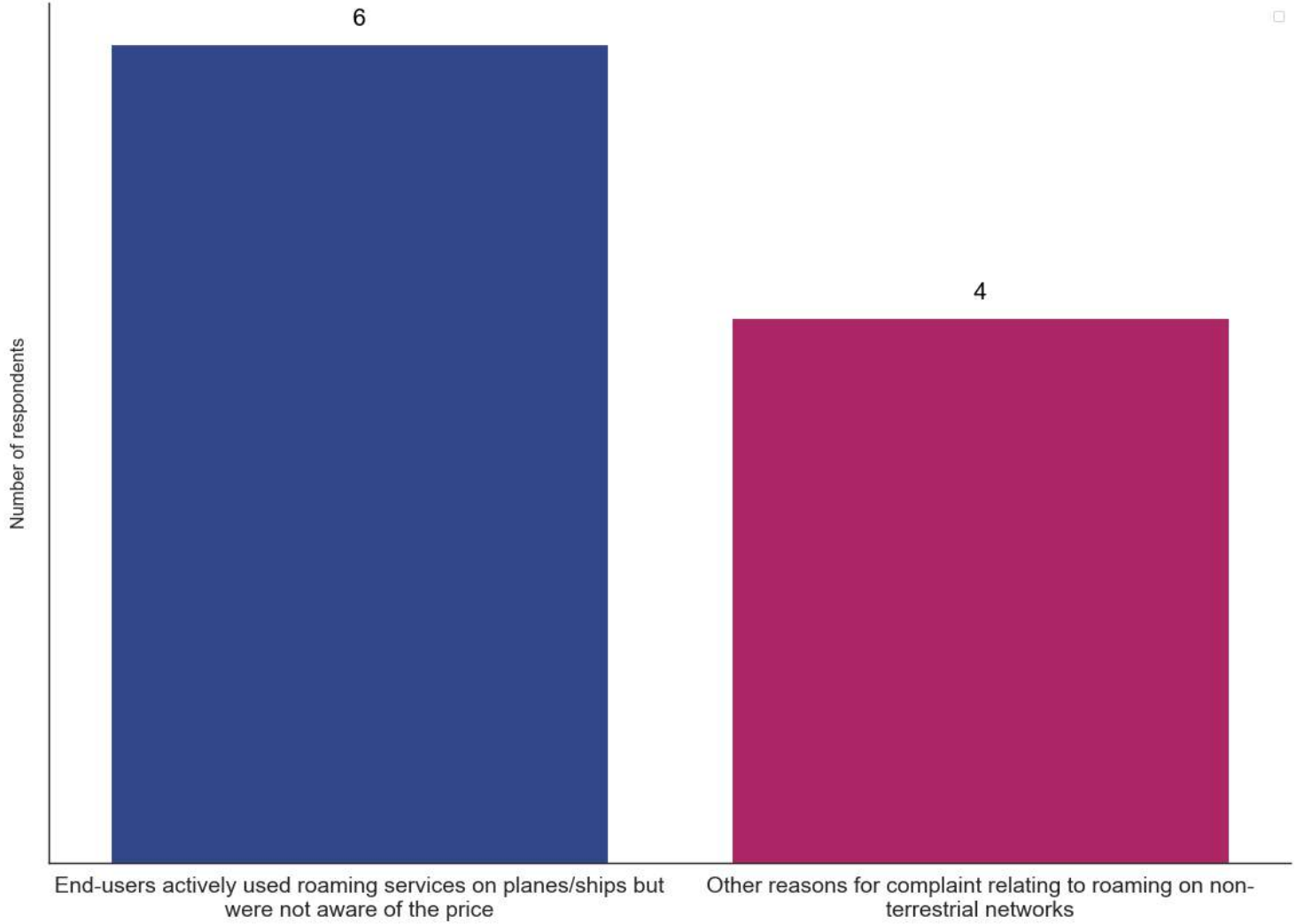


Figure 86 depicts the number of NRAs that received complaints regarding roaming on non-terrestrial networks.

Figure 87: Complaints from end users received by NRAs regarding QoS (total number of respondents Q4 2024 – Q3 2025 = 23)

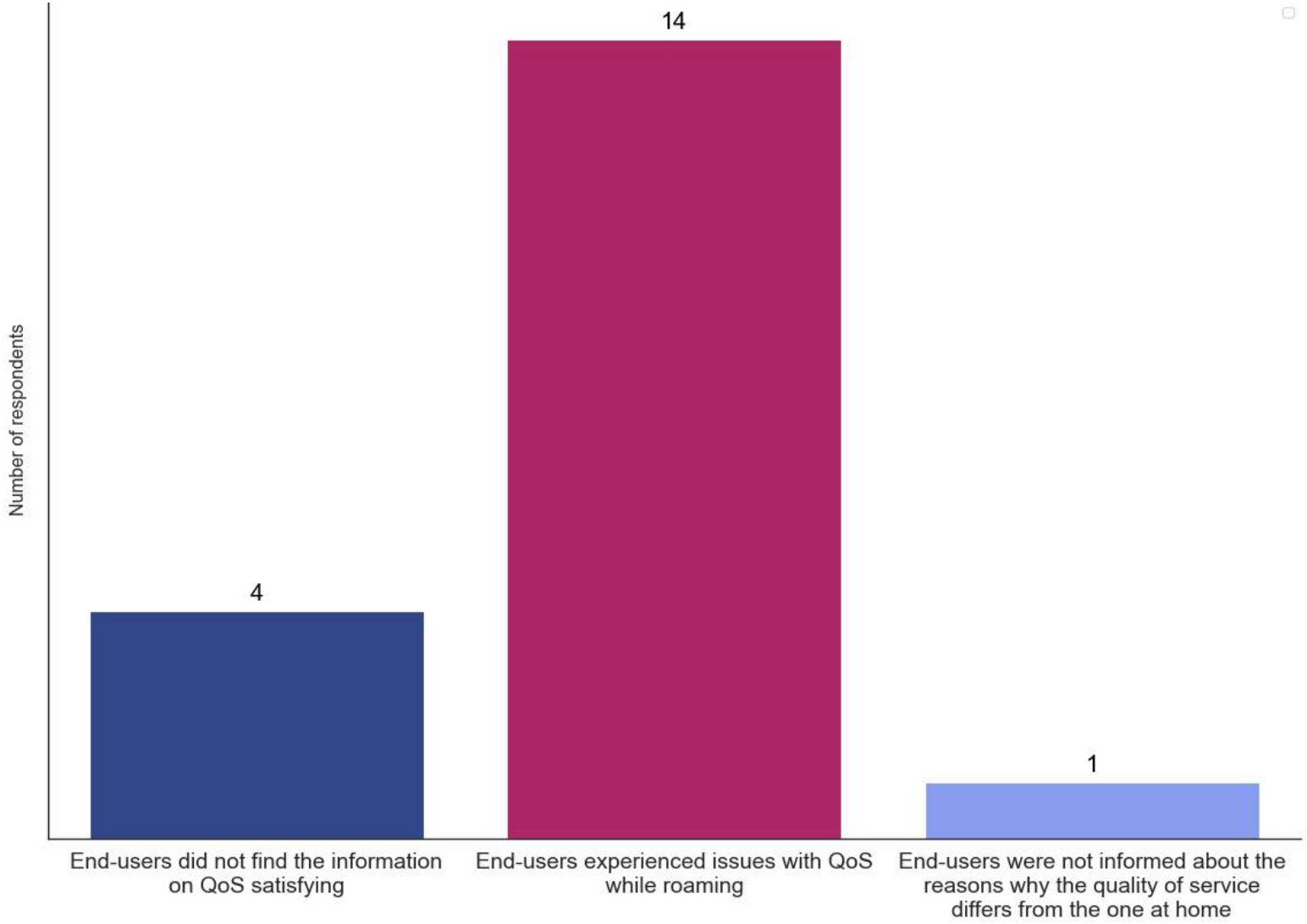


Figure 87 depicts the number of NRAs that received complaints regarding QoS related issues.

Figure 88: Complaints from end users received by NRAs regarding access to emergency services and other complaints (total number of respondents Q4 2024 – Q3 2025 = 26)

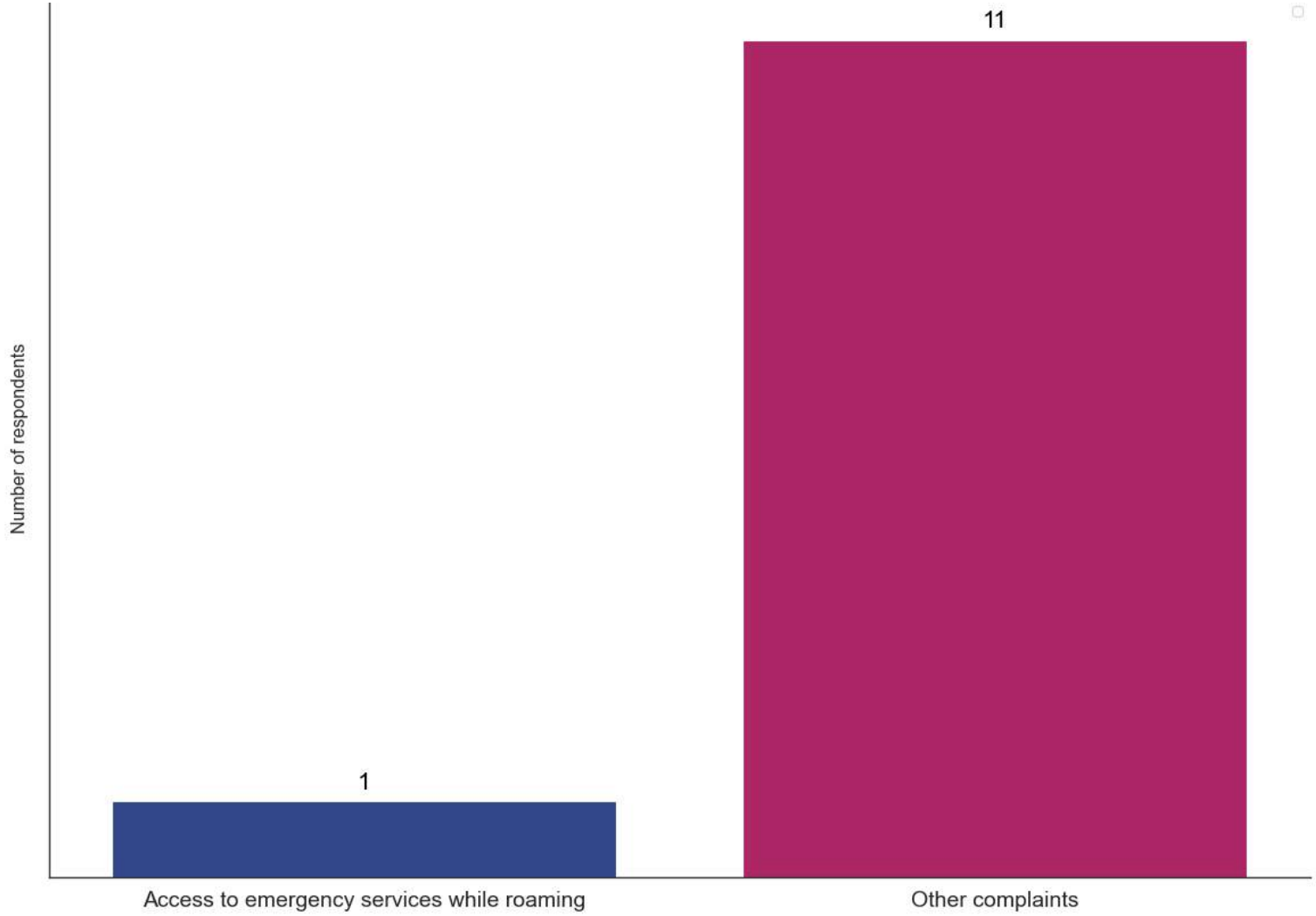


Figure 88 depicts the number of NRAs that received complaints regarding access to emergency services and other complaints that do not fall in to the previous categories.

Annex I: Methodology for the data collection

Because of the broad scope and complexity of the requirements stemming from the Roam Like At Home rules in the Roaming Regulation, key indicators were developed to support data collection when these rules entered into force. In addition, while the results are derived from the same questionnaire, the methodology used for some data from these new key indicators can differ between countries or roaming providers for a number of reasons. Particularly relevant are the following reasons:

- Differences in the methods used by roaming providers to allocate volumes for the different roaming services: comparability of data between different tariffs is affected by a number of reporting criteria, including roaming consumption from the volumes in the domestic mobile tariff plan (RLAH), the use of roaming services in excess of the limits of the FUP or if roaming is not periodic (RLAH+, non-compliance from abusive or anomalous usage);

- Difficulties in estimating the actual revenues for the roaming services and the mobile domestic services: as most of the roaming providers provide domestic bundled services, it is therefore difficult to allocate revenues to the different domestic individual services (e.g.: fixed voice, mobile, internet, TV);

- Difficulties in differentiating between domestic-only and intra-EEA: due to the introduction of Roam Like at Home rules, it has become difficult to determine the part of the domestic revenues only relative to intra-EEA roaming communications for these bundled tariff plans. For these tariffs, it is only possible to separate the revenues relative to the roaming surcharge applied (e.g. when the roaming Fair Use Policy is exceeded).

In consideration of these difficulties, the report made use of the following assumptions:

- all revenues resulting from bundles that include mobile services are allocated to domestic services regardless of whether the mobile service is provided in the domestic network (domestic service) or in a visited network (roaming service). Thus, the domestic revenues now include the intra-EEA roaming component from RLAH tariffs. Any other type of revenue (such as those originating from fixed telephone service or fixed internet service, sale of mobile devices, the initial one-time charge for a new/renewed subscription, subscription fees to other non-telecommunication services, etc.) should not be contained, despite the difficulties in allocating the revenues only relative to mobile services. Revenues from international mobile calls/SMS may also be included;

- the retail intra-EEA roaming revenues are only relative to the revenues resulting from the roaming surcharges (the domestic price component of the roaming service is excluded from the “retail intra-EEA roaming revenues)” and were included in the “Retail domestic revenues”).

While the measurement of balanced and unbalanced traffic should include volumes and revenues from all operators per country, such information is currently only available for a limited number of NRAs. For some countries, even if a data set is available, not all operators

are included. The results related to the EEA average wholesale prices should be subject to cautious interpretation, because some countries were not able to submit comparable data on balanced/unbalanced and total traffic.

Considering the aforementioned difficulties in obtaining reliable and comparable data, for some indicators, there is a limited number of countries which have opted for not supplying the data relative to those indicators. This is not at all unusual for a comprehensive data collection of this type. In most cases, the NRA was able to work with each roaming provider to resolve or alleviate the problem. In other cases, where system upgrades are necessary to comply with the new format of the data collection, the roaming provider was asked to provide the best possible estimate currently available and to complete upgrades in time to provide high quality data for the next data collection. Some NRAs expressed major data quality challenges as well as the use of different reporting systems by roaming providers.

At the wholesale level, roaming providers often receive discounts based on variables like volume of traffic, calculated at the end of a 12-month period. When providing data for these reports, roaming providers may estimate the effect of such discounts on data for each quarter. Because the actual discount may vary from the estimate, there may be an apparently 'anomalous' result for the quarter when the discount is actually applied. This should be kept in mind when comparing wholesale figures for different quarters in the same year.

In a few cases, the number of roaming providers changed, which may cause apparent changes in volumes and revenues between quarters. A list of contributing roaming providers is included in the Annex of each Report.

When wholesale prices are above the price caps, in most cases the reason is that the average price to comply with the Regulation is the annual price and not a quarterly one, and in such cases some quarters compensate for others. Another reason may also be inaccuracies in reporting for the data collection itself.

For ease of comparison, the euro (EUR) is used throughout this Report. Within the EEA, currency fluctuations between the EUR and other national currencies are likely to have affected the average prices reported for EEA countries outside the Eurozone.

Conversion of gigabytes to megabytes was done in line with Recital 17 of the Regulation (EU) 2017/920 of the European Parliament and of the Council of 17 May 2017 amending Regulation (EU) No 531/2012, which results in 1 gigabyte (GB) being equal to 1000 megabytes (MB). Operators may apply a different formula, which may slightly affect the accuracy of data.

All retail prices included in the charts exclude VAT. They are an average of prices paid by postpaid and prepaid tariff plan customers. All averages are based on actual minutes of voice calls or actual GB of data, unless expressly stated otherwise.

With regard to wholesale roaming resale access according to Article 3 (4) of the Roaming Regulation, MNOs may charge fair and reasonable prices for components not covered by paragraph 3. Prices may thus be higher than the price caps given in Article 7 (1), Article 9 (1) and Article 12 (1) of the Roaming Regulation. Some data also include volumes and tariffs coming from roaming in non-EU countries in Europe. It should also be noted that the average wholesale roaming voice tariff for agreements applying Article 3 of the Roaming Regulation

might be above the cap because the calculation is based on actual minutes (the Regulation permits to invoice 30 seconds for calls that are shorter).

The EU Roaming Regulation also applies to the EEA EFTA States Norway, Iceland and Liechtenstein and this Report includes indicators from Norway and Liechtenstein.

Specifically regarding data on connected objects/devices, it is worth mentioning that roaming providers may draw on different methodologies to differentiate between connected objects/devices and mobile subscribers. In addition, as permanent roaming is defined bilaterally by roaming providers during wholesale negotiations, the data provided for permanent roaming may refer to different types of usage.

Annex II: Regulatory evolution

The ERG initially worked on the long-standing issue of high prices for international roaming services. Following its creation in January 2010, BEREC took over responsibility for this work from the ERG.

The 2007 Regulation

In 2005, the ERG undertook a study on international roaming that concluded that the EC Regulatory Framework did not provide the necessary tool-kit for NRAs to tackle the problems identified. The ERG wrote to the European Commission in December 2005 highlighting its concerns.

After significant debate, the first Regulation on international roaming services was published on 29 June 2007. The primary provisions capped wholesale and retail charges for voice calls under Eurotariff and set a number of transparency provisions to help ensure that consumers were well informed. The provisions of the Regulation entered into force at different times, with retail and transparency provisions taking full effect by the end of September 2007 and wholesale provisions calculated annually from the end of August 2007[10].

The 2009 amended Regulation

On 22 April 2009, the European Parliament (EP) adopted Regulation (EC) No. 544/2009 at first reading, with a view to amending Regulation (EC) No. 717/2007. Subsequently, on 8 June 2009, the Council of EU Telecoms Ministers formally adopted the new EU roaming rules approved by the European Parliament. The definitive text of Regulation (EC) No. 544/2009 was published in the Official Journal of the European Union on 29 June 2009.[11,12]

In particular, the Regulation introduced measures related to price regulation of voice and SMS roaming services at both retail and wholesale levels, and data roaming services at wholesale level, applicable from 1 July 2009 to 30 June 2012.

From July 2010 to June 2012, additional retail transparency measures to protect consumers from “bill shock” when using data roaming services were introduced.

The 2012 Regulation

On 30 May 2012 the Council of the European Union approved the International Roaming Regulation III,[13] which entered into force on 1 July 2012.[14]

The Regulation introduced the retail and wholesale roaming measures applicable from 1 July 2012, including wholesale and retail price regulation for voice, SMS and data roaming services, with wholesale caps for all roaming services and retail caps for data roaming services

[10] In Norway and Iceland the 2007 Regulation was in force from the end of 2007 to the 2nd quarter 2010.
[11] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:167:0012:0023:EN:PDF.
[12] From the 3rd quarter 2009 to the 1st quarter 2010, Regulation 544/2009 applied in the EU while the first Roaming Regulation (EC) No. 717/2007 remained in force in Norway, Iceland and Liechtenstein, with slightly higher voice caps, no SMS caps and no wholesale data cap.
[13] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:172:0010:0035:EN:PDF.
[14] With regard to the EEA EFTA countries, it must be noted that the Roaming Regulation applies in these countries as from 7 December (Norway and Liechtenstein) and 21 December (Iceland) 2012.

decreasing on an annual basis. In addition, the obligation for mobile network operators (MNOs) to meet all reasonable requests for wholesale roaming access was introduced and the safeguard mechanisms were extended.

The 2012 Regulation as amended by Regulation (EU) No. 2120/2015

On 3 April 2014, the European Parliament took up the position, within the framework of the procedure for the adoption of a Regulation for a European Single Market for Electronic Communications (TSM Regulation), to abolish retail roaming surcharges in order to allow customers to "Roam Like at Home" (RLAH) with a fair use limit.

Regulation (EU) No. 2015/2120,[15] adopted by the European Parliament on 27 October 2015 and published in the Official Journal of 26 November 2015, includes amendments to Roaming Regulation No. 531/2012,[16] the main one being the principle of Roam Like At Home, i.e. requiring roaming providers not to levy any surcharge in addition to the domestic retail price on roaming customers as of 15 June 2017 (RLAH tariffs).

However, there are several cases where the roaming provider is allowed to apply surcharges and the possibility for a roaming provider to apply for authorisation to apply a surcharge was created. Furthermore, similar to the provisions set out in the third Roaming Regulation, roaming providers can also offer alternative roaming tariffs as an alternative to RLAH and customers may deliberately choose those alternative tariffs.

It should further be mentioned that the Roaming Regulation also established a transitional period, from the 30 April 2016 to 14 June 2017, where operators could apply a surcharge in addition to the domestic price for the provision of retail roaming regulated services.

The amendments to the Roaming Regulation resulted in an update of the BEREC Benchmark Report, which from this period onwards included indicators on volumes and revenues for RLAH, RLAH+ (non-compliance with/exceeding the FUP), RLAH+ (derogation) and alternative tariffs offered by operators.

The 2012 Regulation as amended by Regulation (EU) No. 2017/920

Regulation (EU) No. 2017/920[17] adopted by the European Parliament on 17 May 2017 and published in the Official Journal of 9 June 2017 includes amendments to Roaming Regulation No. 531/2012,[18] the main one regarding new wholesale prices for voice, SMS and data services that entered into force on 15 June 2017. Also, its amendments included new provisions for wholesale agreements to prevent permanent roaming and the requirement to collect data about the evolution of actual wholesale roaming rates for unbalanced traffic between providers of roaming services, and on the relationship between retail prices, wholesale charges and wholesale costs for roaming services.

The amendments to the Roaming Regulation resulted in an update of the BEREC Benchmark Report, and from that period onwards, the Report included the lowest charged as proxy wholesale costs for roaming services and those new clauses to prevent permanent roaming

[15] Available at: http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32015R2120.
[16] Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012R0531.
[17] Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0920.
[18] Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012R0531.

introduced in the roaming wholesale agreements. In 2019, an additional section in the questionnaire was introduced which requested data on roaming for connected objects/devices.

Recast of the Roaming Regulation by Regulation (EU) 2022/612

To further reduce the burden of MVNOs and roaming providers in outbound roaming countries, the price regulation of roaming services was extended and a glide path was introduced to further reduce the caps for voice, SMS and data roaming services.

In addition to confirming the measures contained in the previous Roaming Regulation, the 2022 Roaming Regulation on the one hand extended the transparency measures aiming by requiring roaming providers to inform end users when roaming on non-terrestrial networks, as well as including information on potential additional charges which can be incurred when using value-added services. Additionally, the requirement was introduced to offer the same QoS to roaming subscribers as available to them at home, provided the network technologies and generations necessary to do so are available in visited country. Finally, a requirement to provide information about local options in the Welcome SMS was added due to the lack of harmonisation of means of access to emergency services for disabled end users,

With the recast of the Roaming Regulation, the roaming data collection also underwent several changes. In particular, the previously separate International Roaming Benchmark Report (IRBMK) and the Transparency and Comparability Report (TACR) were merged into one report. With regard to the data previously collected for the IRBMK, the distinction between group and non-group wholesale roaming volumes and revenues, billed RoW minutes, local break-out, and roaming volumes on a per-country basis were removed from the scope of the data collection.

In addition, one section to be completed on a voluntary basis was introduced to allow for monitoring roaming developments in the Western Balkan region. The data provided for this section may be published in the future.

With regard to the data previously collected for the TACR, new sections were added regarding transparency measures on the wholesale level, and the offer of 5G roaming services was requested at a more detailed, country-specific level. Additional questions were introduced regarding, amongst other things, financial cut-off limits, fair use policies, and wholesale offers for connected objects/devices. The questionnaire circulated among NRAs no longer requested data on the availability of information available to end users on the websites of NRAs and on information facilitating the comparison of tariffs. Instead, a section on regulatory practice as well as a section on provider complaints were added.

Annex III: List of respondents

Operators that provided data for the period 1 October 2024 – 30 September 2025:

Austria
A1 Telekom Austria
Cubic Telecom
Dialog Telekom
HoT Telekom
Hutchison 3G Austria
Kabelplus
LTK
Lycamobile
Mass Response
MTEL
Porsche Smart Mobility
RMTS
T-Mobile Austria

Belgium
Proximus
Telenet Group
Orange Belgium
Lyca Mobile
Mobile Vikings

Bulgaria
Vivacom Bulgaria
Yettel Bulgaria
A1 Bulgaria

Croatia
Hrvatski Telekom
A1 Hrvatska
Telemach

Cyprus
Cablenet
Cyta
EPIC
Primetel

Czech Republic
ČEZ Prodej
O2 Czech Republic
Tesco Mobile ČR
T-Mobile Czech Republic
Vodafone Czech Republic

Denmark
Hi3G Denmark
Nuuday
Telenor
TeliaDanmark
Telmore
Eesy
Yousee
Relatel
TDC Erhverv

Estonia
Telia Estonia
Elisa Eesti
TELE 2 Eesti

Finland
DNA
Elisa Corporation
Telia Finland

France
Orange France
SFR
Bouygues Telecom
Free Mobile
Orange Caraïbes
SRR
BTBD
Lycamobile
Coriolis
La Poste Mobile

Germany
Deutsche Telekom
Freenet
Lebara Mobile Germany
Lycamobile Europe
Telefónica Germany
United Internet
Vodafone

Greece
COSMOTE Mobile
Vodafone Panafon
Nova

Hungary
Yettel Magyarország Zrt.
Magyar Telekom Nyrt.
One Magyarország Zrt.
Digi Kft.
Netfone Telecom Távközlési és Szolgáltató Kft.

Ireland
Eircom Limited
Three Ireland (Hutchison) Limited
Lycamobile Ireland Limited
Tesco Mobile Ireland
Vodafone Ireland
Virgin Media Ireland Limited

Italy
Daily Telecom
Digi Italy
Iliad Italia S.p.A.
Fastweb
Irideos
Kena Mobile
Lycamobile
Nextus
Optima Italia
Poste Pay
Rabona
Tim
Tiscali
Vianova
Vodafone
Wind Tre S.p.A.

Latvia
Bite Latvia
LatvijasMobilaisTelefons
Tele2

Liechtenstein
Salt (Liechtenstein)
Telecom Liechtenstein
Swisscom (Schweiz)

Lithuania
Telia Lietuva
Tele2
Bite Lietuva
Teledema

Luxembourg
POST
Proximus Luxembourg
Orange Communications Luxembourg

Malta
Epic Communications Ltd
GO plc
Melita Ltd

Netherlands
Budget Mobiel
KPN
Lebara
Lycamobile
Odido Netherlands (T-Mobile Netherlands)
Vodafone Libertel
youfone

Norway
Ice
Fjordkraft
Lycamobile
Telenor
Telia Norge

Poland
P4
Polkomtel
T-Mobile Polska
Orange Polska
Lycamobile
Premium Mobile

Portugal
DIGI Portugal, Lda.
Lycamobile Portugal, Lda.
MEO – Serviços de Comunicações e Multimédia, S.A.
NOS Comunicações, S.A.
NOWO Communications, S.A.
Vodafone Portugal – Comunicações Pessoais, S.A.

Romania
Orange România
RCS & RDS
Telekom Romania Mobile Communications
Vodafone Romania

Slovak Republic
O2 Slovakia
Orange Slovensko
Slovak Telekom
4ka

Slovenia
TELEKOM SLOVENIJE, D.D.
A1 Slovenija d.d.
TELEMACH D.O.O.
T-2 d.o.o.
HOT mobil, telekomunikacije in storitve d.o.o.

Spain
Aire Networks
Digi Spain Telecom, S. L.
Orange Espagne, S. A. Unipersonal
Telefónica Móviles de España, S. A.
Vodafone Espana, S. A. Unipersonal
Xfera Móviles, S. A. Unipersonal (Yoigo)

Sweden
Hi3G Access
Telenor Sverige
Telia Company
Tele2 Sverige