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To: Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union

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**COMMISSION STAFF WORKING DOCUMENT**

**Review of the Delegated Regulation (EU) 2021/654 setting EU-wide maximum termination rates (Eurorates) for voice calls**

## TABLE OF CONTENTS

1.	Introduction .....	2
1.1.	Procedure for the preparation of the Review.....	3
1.2.	Termination services .....	4
2.	Consultation.....	6
2.1.	Targeted public consultation .....	6
2.2.	BEREC Opinion () .....	9
2.2.1.	General assessment.....	9
2.2.2.	Market functioning .....	9
2.2.3.	Transparency, reciprocity and fraud .....	10
2.2.4.	Regulatory consideration.....	10
2.3.	Conclusion on Consultations .....	11
2.4.	Commission’s view .....	11
2.4.1.	Administrative and compliance burdens .....	11
2.4.2.	Downsized revenue streams .....	12
2.4.3.	Fraudulent practices and CLI spoofing .....	12
2.4.4.	Reciprocity with non-EU operators.....	13
2.4.5.	Transit market.....	13
2.4.6.	SMS termination.....	14
2.4.7.	Technological neutrality and the definition of termination services .....	14
3.	Regulation of termination rates (markets) in the union.....	16
3.1.	The removal of the termination markets from the Recommendation on Relevant Markets in 2020.....	16
3.2.	The evolution of the regulatory situation in the EU since the adoption of the Delegated Regulation and its entry into force on 1 July 2021 ..	16
4.	Rates Assessment .....	21
4.1.	Introduction to cost principle and cost modelling .....	21
4.2.	Mobile Termination Rate (MTR) .....	23
4.3.	Assessment of the MTR in relation to estimated costs.....	26
4.4.	Fixed Termination Rate .....	27
4.5.	Conclusion – Rates assessment .....	31
5.	Conclusion.....	32

## 1. INTRODUCTION

Pursuant to Article 75(2) of the European Electronic Communications Code (hereinafter the “Code” or “EECC”)<sup>(1)</sup>, the Commission is required to review the Delegated Regulation (EU) 2021/654 (hereinafter the “Regulation” or the “Delegated Regulation”)<sup>(2)</sup>, which sets Union-wide voice termination rates for fixed and mobile services (referred together as “Eurorates”), every five years. This review aims to assess whether the Regulation remains appropriate, proportionate, and effective in achieving its objectives.

The Delegated Regulation established a single maximum Union-wide mobile termination rate (MTR) and fixed termination rate (FTR)<sup>(3)</sup>, replacing divergent national rates with a harmonised framework. Its main purpose is to ensure cost-oriented and non-discriminatory termination services, promote competition and market integration, and provide regulatory certainty for operators across the European Union (EU). The Regulation is underpinned by a bottom-up long-run incremental cost (“BU-LRIC”) model, designed to reflect the efficient cost of providing wholesale voice termination while ensuring cost recovery.

The current review focuses on three main aspects:

- the outcome of the targeted public consultation<sup>(4)</sup> and the Body of European Regulators for Electronic Communications (“BEREC”) opinion<sup>(5)</sup>;
- recent market developments, including the evolution of regulation and deregulation of wholesale termination markets across Member States; and
- the assessment of the appropriateness of the current Eurorates and the underlying cost model, including whether market and cost developments justify any adjustment to the existing rates.

The analysis also considers whether the existing regulatory framework continues to meet the underlying policy objectives, or whether adjustments may be justified considering technological, economic, or market changes.

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<sup>(1)</sup> Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code, OJ L 321, 17.12.2018, pp. 36–214.

<sup>(2)</sup> Commission Delegated Regulation (EU) 2021/654 of 18 December 2020 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate, OJ L 137, 22.4.2021, pp. 1–9.

<sup>(3)</sup> Under Delegated Regulation, the Eurorates are set at 0.2 EURcent per minute for mobile voice termination and 0.07 EURcent per minute for fixed voice termination. The mobile Eurorate entered into force in stages from 1 January 2022, reaching its final level of 0.2 EURcent per minute on 1 January 2024, while the fixed Eurorate has applied at a single level since 1 January 2022.

<sup>(4)</sup> [Targeted consultation on the review of the Delegated Regulation setting Union-wide termination rates | Shaping Europe’s digital future.](#)

<sup>(5)</sup> BEREC’s opinion on the review of the functioning of the delegated regulation setting union-wide termination rates regulated under the regulation (EU) 2021/654, bor (25)138.

## 1.1. Procedure for the preparation of the Review

To prepare the review of the Delegated Regulation, the Commission services have drawn upon a wide and comprehensive range of inputs to ensure that the assessment is robust, evidence-based, and reflects the market developments across the Union. The review process was designed to capture the perspectives of key stakeholders and take into account the practical experience gained since the adoption of the Delegated Regulation.

Firstly, the Commission launched a targeted public consultation <sup>(6)</sup> aimed at gathering feedback from industry stakeholders and other interested parties on the functioning and implementation of the Delegated Regulation. This consultation provided an opportunity for operators, telecom associations, consumer groups, and other relevant actors to express their views on the effectiveness and proportionality of the regulatory framework. Through this exercise, the Commission collected valuable insights on market trends, technological developments and regulatory challenges encountered in practice.

Secondly, in parallel with the targeted consultation, the Commission sought the opinion <sup>(7)</sup> of BEREC. As an independent advisory body composed of national regulatory authorities (NRAs), BEREC plays a key role in ensuring consistent application of the regulatory framework across the EU. Its input provided an expert assessment of the functioning of the Delegated Regulation, drawing upon the collective regulatory experience of the NRAs.

Thirdly, the Commission services also took into account the draft measures notified by NRAs under Article 32 of the Code. These notifications, submitted in the context of national market analyses, provided detailed evidence on how NRAs have taken into consideration the entry into force of the Delegated Regulation and its implications for the regulation of wholesale termination markets. The introduction of the Eurorates limited the risk of excessive termination rates, which was previously identified as the main competition concern in these markets. In its Explanatory Memorandum <sup>(8)</sup> accompanying the Commission Recommendation (EU) 2020/2245 of 18 December 2020 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation <sup>(9)</sup> (hereinafter “2020 Recommendation on Relevant Markets” or “2020 RRM”), the Commission found that wholesale fixed and mobile voice termination markets no longer meet the three-criteria test, in particular the second criterion, which assesses whether a market tends towards effective competition. In this context, the national notifications examined by the Commission have provided valuable insights into how this conclusion has materialised in practice, enabling an assessment of the consistency, effectiveness and impact of the Delegated Regulation across Member States.

Finally, in order to estimate the costs of providing mobile voice call termination services, the Commission services considered the results of a cost model <sup>(10)</sup>, developed by Axon Partners Group (“Axon”). This model, commissioned specifically for the purpose of supporting the review, provides a detailed bottom-up assessment of the costs incurred by

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<sup>(6)</sup> [Targeted consultation on the review of the Delegated Regulation setting Union-wide termination rates | Shaping Europe’s digital future.](#)

<sup>(7)</sup> BoR (25)138.

<sup>(8)</sup> SWD(2020) 337 final

<sup>(9)</sup> OJ L 439, 29.12.2020, pp. 23–31.

<sup>(10)</sup> [Finalisation of the mobile cost model for roaming and the delegated act on a single EU-wide mobile voice call termination | Shaping Europe’s digital future](#) and 2025 update: [2025 Update of the mobile cost model for roaming and voice call termination in the EU | Shaping Europe’s digital future.](#)

efficient operators in delivering voice termination services. The model’s findings were used to validate the current regulatory approach and to assess whether adjustments might be needed to maintain cost-based and proportionate termination rates in the evolving market context.

Taken together, these inputs form a comprehensive evidence base that has guided the Commission services in preparing the review of the Delegated Regulation, ensuring that any conclusions or proposed changes are well-informed, transparent, and aligned with the objectives of the Code.

## **1.2. Termination services**

Voice termination rates are the wholesale rates that electronic communications operators charge each other to terminate calls on their respective networks (“termination rates”) <sup>(11)</sup>. The establishment of a voice call between two subscribers who are served by different operators requires the use of both operators’ networks. The operator who serves the calling subscriber is called the ‘originating operator’ while the operator who serves the called subscriber is called the ‘terminating operator’. The terminating operator will connect the call from the point of interconnection with the originating operator in its network up to the device of the called subscriber. This service is called voice call termination, and it can be provided only by the operator serving the called subscriber, i.e. by the terminating operator. Each operator has full control over terminating voice calls to its own subscribers. Thus, each operator has a monopolistic position on the market for terminating calls on its own network and has the ability and incentives to set the wholesale price for terminating calls at a level that is significantly above-cost.

Wholesale voice termination services (“termination services”) represent a non-replicable input for the provision of retail voice services, given that voice termination can only be supplied by the network provider to which the called party is connected. There are no demand or supply substitutes for voice termination on an individual network. Therefore, each network represents a separate relevant market in which each operator is a monopolist for the calls terminated in its network. In addition, under the calling party pays (“CPP”) principle <sup>(12)</sup>, which is the one mostly used in the Union, the party initiating a call is charged but the receiving party is not. The wholesale termination rate is paid by the originating operator to the terminating operator. The originating operator incorporates this cost into its retail prices; thus, it is ultimately borne by the caller (i.e. not by the called party).

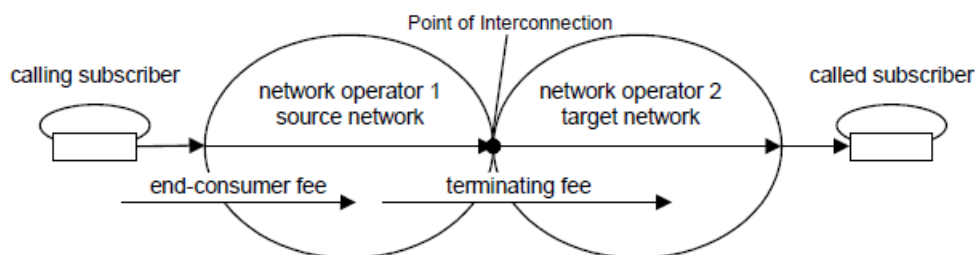
In the context of interoperable networks, fixed and mobile interconnections follow a ‘two-way’ model, whereby an interconnection agreement needs to be negotiated by the interconnecting operators A and B, to deliver calls from operator A’s customers to operator B’s customers, and vice versa. Figure 1 shows a typical calling party pays (CPP) termination arrangement for the termination of calls (showing only one-way interconnection).

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<sup>(11)</sup> Fixed and mobile termination rates relate only to voice calls. They do not relate to data services.

<sup>(12)</sup> Or “calling party network pays” (CPNP) at the wholesale level, according to which the termination charge is set by the called operator and paid entirely by the operator of the calling subscriber.

Figure 1: Termination services for certain numbering ranges



Source: *Rundfunk und Telekom Regulierungs-GmbH (RTR) (Austrian Regulatory Authority for Broadcasting and Telecommunications)*

This system raises two main competition concerns. Firstly, due to their monopoly position in terminating calls in their networks, operators, in the absence of regulation, would be able to extract excessive profits at the wholesale level<sup>(13)</sup>. Secondly, operators have an incentive to charge high rates to increase their rivals' costs. This is possible because the termination rate charged by an operator is a cost to another operator.

There are also other, less market-specific, competition concerns affecting the wholesale termination markets. Operators with many customers may have an incentive to refuse terminating calls from smaller operators. This would make the smaller operators' network much less attractive to (potential) customers. More realistically, operators may not refuse<sup>(14)</sup> but may make it more difficult and costly to interconnect to and terminate calls in their networks. Such behaviour may qualify as constructive refusal to supply or discriminatory behaviour under competition law.

High termination rates, even if traffic is symmetrical, would lead to anti-competitive outcomes at least in two ways. First, high wholesale termination rates would prevent otherwise possible unilateral decreases in retail prices, leading to high retail prices. This is because high termination rates would act as a price floor for operators and reduction in retail prices below termination rates would lead to monetary losses at least in the variable part of a two-part retail tariffs. Second, high termination rates, in conjunction with lower prices for on-net<sup>(15)</sup> calls would incentivise mobile customers to keep a large proportion of their calls on-net, leading to higher barriers to entry and expansion by smaller operators which, due to their size, would be unable to match such high on-net share of calls.

The application of different termination rates across the Union led to distortions in the functioning of the internal market for reasons explained below.

Differences which are not due to cost differences in termination rates across the Union can lead to cross-subsidisation of operators and ultimately consumers in countries with higher termination rates, to the detriment of operators and end-users in countries with lower termination rates.

<sup>(13)</sup> Commission Staff Working Document accompanying the Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, Explanatory Note, C(2009)3359, SEC(2009) 599.

<sup>(14)</sup> The possibilities to refuse interconnection is limited by the fact that according to the regulatory framework the NRAs have the powers to intervene in order to ensure end-to-end connectivity.

<sup>(15)</sup> "On-net" refers to calls terminated on the originating operator's own network, as opposed to "off-net" calls, which are terminated by a different operator than the originating operator.

In general, and independently on whether rates are based on efficient costs, when an operator from a country with lower termination rates exchanges traffic with an operator from a country with higher termination rates, even if the incoming and outgoing traffic is equal, operators from high termination rates countries receive higher remuneration for the same service.

Further, different wholesale termination rates may distort consumer behaviour by reducing the volume of calls to countries with high rates.

Moreover, as acknowledged by BEREC<sup>(16)</sup>, termination rates higher than the efficient costs could have a negative effect on the development of pan-European offers, proposing uniform pricing schemes for international calls to networks across the Union, regardless of the Member State where the end-user is based. The lack of uniform pricing, together with the high cost of calls directed outside the border of each Member State – for which historically high termination rates are at least partly responsible – constitute an obstacle to voice communication within the internal market. This represents a barrier affecting not only the electronic communications sector, but all sectors that rely on voice communications for their commercial activities.

Further, unjustified differences in the level of rates among Union countries in two-sided and interdependent markets such as termination also distorts investment incentives. It creates regulation-induced asymmetrical revenue streams between Member States, which distort efficient investment decisions across Member States' borders.

The unequal regulation of termination rates, i.e. based on the different principles, constitutes a barrier to trade in the internal market. Full harmonisation of termination rates is intended to foster market integration by limiting net payments (and cross-subsidisation) between operators in different Member States, which are due to different levels of national termination rates rather than due to different call volumes, thereby reducing barriers to intra-Union trade.

Finally, divergent approaches to termination rates among Member States undermine the predictability of regulation and legal certainty within the Union, with operators not being able to rely on consistent rules for voice traffic that cross Member State borders. Regulatory predictability reduces uncertainty for investors, which in turn reduces the return required by the investor – leading to a larger willingness to invest.

## **2. CONSULTATION**

### **2.1. Targeted public consultation**

The Commission's consultation on the Delegated Regulation sought to gather evidence on the functioning and impact of harmonised fixed and mobile termination rates within the EU. The Commission launched the targeted public consultation on 13 June 2025 via EU survey and closed it on 16 September 2025<sup>(17)</sup>. In total, 18 submissions were received, including contributions from 13 operators, four industry associations, and one NRA. The responses provided a balanced picture: while the majority of stakeholders recognise that

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<sup>(16)</sup> BEREC response to the European Commission's public consultation on the evaluation of the Termination Rates Recommendation, BoR (16) 100, p. 8-9.

<sup>(17)</sup> [Targeted consultation on the review of the Delegated Regulation setting Union-wide termination rates | Shaping Europe's digital future.](#)

Eurorates have delivered important benefits in terms of harmonisation, regulatory clarity, and predictability, operators and industry associations also highlight new financial, administrative, and operational challenges emerging under the current framework.

Overall, respondents agree that Eurorates have successfully eliminated national discrepancies and simplified rate-setting practices, thereby achieving the Regulation's primary objective of regulatory alignment across the EU. The harmonised rates are widely perceived to have improved legal certainty, enabling operators to plan with greater confidence and reducing the scope for bilateral disputes. However, almost all operators emphasise that the reduction in termination rates has put pressure on wholesale revenue streams, particularly in traditional voice markets. Several note that the decline in revenues threatens their ability to recover costs, maintain infrastructure investment, and innovate. This concern is especially notable in smaller or higher-cost markets, where margins were already limited prior to harmonisation. Accordingly, a broad coalition of stakeholders invites the Commission to freeze the current rates and to refrain from further reductions.

From a retail perspective, operators and industry associations observe limited or negligible benefits to consumers. Retail prices for voice services were already low before the introduction of Eurorates. In parallel, the rapid adoption of Over-the-Top ("OTT") communications services such as WhatsApp, Signal, and Telegram has continued to impact traditional voice revenues. As a result, operators contend that the impact of Eurorates on consumers has been minimal, while the financial burden has been disproportionately felt by service providers.

Several contributions raise concerns regarding the continued presence of competition challenges, particularly for smaller operators. These include situations where wholesale arrangements exceed the regulated caps through additional internal or transit charges, or where access to direct interconnection remains limited or subject to high fees, forcing reliance on unregulated transit services. Stakeholders argue that such practices may distort competition and raise barriers to entry, calling for the continued empowerment of NRAs to address discriminatory or non-transparent behaviour. In this context, some recommend the inclusion of SMS termination under the Delegated Regulation, given similar market characteristics and the persistence of inflated SMS termination prices across Member States. Others support further updates to the cost model to reflect 5G efficiencies and assess the long-term feasibility of approaches such as bill-and-keep.

One of the most recurrent themes in the stakeholders' feedback concerns the rise of fraudulent activity, particularly Calling Line Identification (CLI) spoofing and manipulation of call origins. Many respondents report a surge in scam traffic originating from outside the EU, disguised with European A-numbers to exploit lower regulated rates. This practice results in operational inefficiencies, and an increased need for monitoring and dispute resolution. Operators call for the introduction of anti-fraud mechanisms, including mandatory call-origin verification, CLI authentication, and cost recovery provisions to offset the resources required to combat these schemes.

Closely linked to this issue is the problem of asymmetry and lack of reciprocity with non-EU operators. Several respondents point out that while EU operators are bound by regulated Eurorates, their counterparts in third countries continue to apply significantly higher termination rates, placing EU-based carriers at a competitive disadvantage. Stakeholders therefore advocate for reciprocity arrangements, greater transparency in international interconnection agreements, and, where appropriate, bilateral or multilateral frameworks to ensure more balanced commercial relations with non-EU markets.

A further area of concern relates to the transit market. Respondents describe this segment as a persistent loophole within the current regulatory regime. In their view, transit providers often apply unregulated mark-ups and hide the true termination costs, leading to inflated wholesale prices. Several operators propose that transit services should be explicitly included within the scope of Eurorates, and that monitoring mechanisms or caps should be introduced to prevent abuse and enhance transparency throughout the value chain.

Despite the intention to simplify regulation, operators and industry associations note that the Eurorates framework has, paradoxically, increased administrative complexity. The need to track exceptions, verify call origins, and comply with reporting obligations has placed a disproportionate burden on smaller operators. Respondents argue that administrative costs are now out of proportion to the revenues generated by termination services, undermining business sustainability. Accordingly, there is widespread support for simplification measures and clearer guidance.

Criticism is also directed at the Axon cost model<sup>(18)</sup>, which serves as the methodological study for setting Eurorates. Some operators and industry associations expressed concerns that the model could be more transparent and better aligned with actual cost structures. They suggested that certain assumptions may lead to rates that do not fully reflect operational realities. In this context, several respondents recommended that the model be reviewed and, where appropriate, refined or complemented by alternative approaches to ensure that the resulting rates remain cost-reflective and sustainable across different market conditions.

Divergences in perspective are evident across stakeholder groups. Larger operators and industry associations generally support the objectives of harmonisation but stress the need for regulatory stability, rate freezes, and reciprocity enforcement. Smaller operators, meanwhile, emphasise simplified compliance processes and cost recovery mechanisms to preserve viability. National regulators, welcome the predictability of Eurorates but highlight ongoing challenges related to dispute resolution and non-EU traffic management.

In light of the above, the following findings emerge as a result of the public consultation:

- Operators and telecom associations urge the Commission to stabilise current Eurorates and to avoid further downward revisions until a comprehensive assessment of cost recovery and investment impact is conducted.
- They recommend introducing stronger anti-fraud measures and CLI verification tools, extending the regulatory scope to transit services, and developing reciprocity mechanisms with third-country operators.
- In parallel, respondents call for simplified administrative procedures.
- Finally, respondents call for improved transparency in cost modelling, and futureproofing of the regulatory framework to account for emerging technologies, IP-based interconnection, and the continuing shift towards OTT communication.

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<sup>(18)</sup> [Finalisation of the mobile cost model for roaming and the delegated act on a single EU-wide mobile voice call termination | Shaping Europe's digital future.](#)

## 2.2. BEREC Opinion <sup>(19)</sup>

### 2.2.1. *General assessment*

In its opinion issued on 2 October 2025, BEREC notes that the introduction of the Eurorates has not had a significant impact on market dynamics, including wholesale or retail prices. This limited effect is largely attributable to the fact that, prior to the adoption of the Delegated Regulation, existing national termination rate regimes, based on the pure Long-Run Incremental cost (LRIC) <sup>(20)</sup> standard had already reduced termination rates to efficient cost levels. This assessment is consistent with the findings of the updated mobile cost model for roaming and voice call termination in the EU. The inclusion of 5G technology, while significantly lowering network costs overall, has had a less pronounced impact on voice termination costs compared to voice roaming services, reflecting the limited room for further cost reductions in the termination segment.

Regarding regulatory burden, BEREC's assessment is clearly positive. The introduction of a single EU cost model, replacing individual national cost models, has reduced the administrative workload for NRAs and, to some extent, for operators. The Eurorates have also simplified and harmonised termination-rate regulation across Member States.

However, BEREC cautions that the risk of misbehaviour by market participants remains. NRAs must therefore retain sufficient powers to intervene, particularly in response to non-price issues that may arise. Some NRAs also raised concerns about cost recovery, especially for operators in smaller markets. Furthermore, BEREC acknowledges persistent operational and regulatory challenges linked to spoofing and the absence of reciprocity in relations with non-EU/EEA operators.

### 2.2.2. *Market functioning*

While the Eurorates effectively addressed pricing issues in termination services, BEREC identified a range of non-price issues, particularly concerning access and transit fees, non-discrimination, and transparency obligations. In some instances, these issues required direct intervention by NRAs.

BEREC underlines that the Delegated Regulation does not address non-price competition problems, leaving room for isolated anti-competitive practices. Such issues must be addressed through national-level regulatory measures, for which NRAs should be adequately equipped with the necessary tools and powers. Given these circumstances, BEREC considers it essential that NRAs retain the ability to adopt symmetric decisions to regulate termination markets where necessary, and to continue resolving disputes at the national level. Moreover, NRAs should remain empowered to set technical and financial conditions governing interconnection and access, whenever required to ensure fair and efficient market functioning.

Finally, BEREC emphasises that definitions of termination services in the Delegated Regulation must remain technologically and service neutral. Termination services should be deemed covered by the Regulation regardless of the type of interconnection (physical or logical) or technology used. The Regulation should also clarify that Eurorates cover only the costs of termination, excluding transit costs, and that only interconnection port

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<sup>(19)</sup> BoR 25(138).

<sup>(20)</sup> The LRIC cost standard is explained in more detail in the section on the cost model below.

costs (including installation and testing) should be included in the termination rates and not any ancillary service costs.

### 2.2.3. *Transparency, reciprocity and fraud*

BEREC highlights a persistent lack of transparency regarding non-EU operators. EU operators currently lack clarity as to which non-EU operators apply termination rates equal to or lower than the Eurorates. As no information is available in the public Annex on the Commission's website, BEREC concludes that no non-EU country currently applies a regulatory regime aligned with the EU framework <sup>(21)</sup>.

BEREC therefore recommends that the next review of the Delegated Regulation should explicitly indicate the country codes to which Eurorates apply. The Commission should also publish a list of non-EU countries with comparable regulation to assist EU operators in determining whether Eurorates apply to calls originating outside the EU. In this context, BEREC also suggests considering reciprocity mechanisms or control measures with third countries to prevent the erosion of Eurorates' benefits through unfavourable trading conditions.

BEREC further notes that termination rates applied by EU operators to non-EU numbers vary significantly, leaving international operators uncertain about the applicable charges. To enhance transparency, BEREC proposes the creation of a summary sheet hosted by NRAs or by BEREC, where operators can publish their voice-termination rates.

Finally, the issue of fraudulent practices, particularly caller-ID spoofing, was frequently mentioned. Operators and transit providers from third countries may manipulate CLI information to benefit from lower Eurorates. BEREC suggests exploring specific regulatory and operational measures to mitigate such fraud, especially in cases of systemic or bulk fraudulent traffic. In severe cases, operators could be empowered to exclude such traffic from being charged under the Eurorates.

### 2.2.4. *Regulatory consideration*

BEREC observes that Article 5a of the amended Regulation (EU) 2015/2120 <sup>(22)</sup>, which requires operators to not apply different retail prices for domestic and intra-EU communications as of 1 January 2029, may lead to unfair competition at the wholesale level, given the existing variation in SMS termination rates across the EU. BEREC therefore invites the Commission to clarify this issue and to consider either including SMS termination within the scope of the Delegated Regulation or conducting a comprehensive evaluation of the matter.

On the reporting obligation under Article 75(3) of the Code, BEREC considers it reasonable to remove or reduce the frequency of reporting. Replacing individual NRA

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<sup>(21)</sup> BEREC here refers to the regulatory regime envisaged under Article 1(4)(b) of the Delegated Regulation, according to which a third country must fulfil the regulatory regime criteria set out in Annex III of the Code.

<sup>(22)</sup> Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union, OJ L 310, 26.11.2015, pp. 1–18.

reports with a single periodic BEREC report would streamline the process and reduce resource requirements.

With regard to the level of the Eurorates, BEREC emphasises the importance of realistic cost-modelling assumptions for all operators, including those in smaller markets. Based on the updated cost model and the absence of evidence of operator hardship or excessive end-user prices, BEREC supports maintaining the current Eurorates' levels. To support continuous evaluation of cost modelling and price calibration, BEREC proposes the establishment of an expert group dedicated to discussing costing and pricing aspects in greater detail.

### **2.3. Conclusion on Consultations**

The evidence gathered through the targeted public consultation and BEREC's Opinion indicates a broad consensus that the Delegated Regulation has achieved its principal objectives of harmonisation, regulatory simplification and predictability across the Union. However, both processes confirm that the introduction of Eurorates has had a limited impact on market dynamics, competition and consumer prices, as national termination rates had already converged towards efficient cost levels prior to the Regulation's entry into force.

Stakeholders and BEREC nevertheless acknowledge that the lower regulated rates have resulted in reduced revenues for operators and therefore call for the current rate levels to be maintained. At the same time, both sources identify a number of continuing challenges, notably concerning access and transit conditions, transparency, and ancillary service charges, as well as fraudulent practices such as caller-ID spoofing and manipulation of call origins.

The absence of reciprocity and transparency in relations with non-EU operators, and the lack of clarity regarding the application of Eurorates to specific country codes, also remain points of concern. Furthermore, respondents draw the attention of the Commission to the administrative burdens associated with compliance and unregulated segments of the transit market that may create distortions.

Overall, there is wide support for maintaining the existing Eurorate levels, enhancing transparency through clearer country listings and publication of termination-rate information, strengthening anti-fraud and reciprocity mechanisms, simplifying reporting obligations, and considering the future inclusion of SMS termination within the regulatory framework in order to ensure coherence, effectiveness and sustainability in the evolving communications environment.

### **2.4. Commission's view**

#### *2.4.1. Administrative and compliance burdens*

The Commission notes that several respondents consider the administrative and reporting obligations under the current framework to be disproportionately burdensome, particularly for smaller operators. It recalls, however, that the harmonisation of termination rates through a single Union-wide cost model has considerably simplified regulatory processes by replacing multiple national models and rate-setting procedures with one consistent and transparent methodology. Periodic updates of this single model are necessary to preserve the accuracy, consistency and effectiveness of the framework. In practice, the administrative effort has been relatively limited: over the past six to seven years, the

Commission has carried out only limited number of exercises involving stakeholder input, primarily to support model updates and reviews.

BEREC, in its Opinion, also considered the overall regulatory burden to be low and proposed certain adjustments aimed at further simplification. In particular, BEREC suggested replacing the current annual reporting by NRAs under Article 75(3) of the Code with a single consolidated BEREC report covering all Member States. The Commission takes note of this proposal and may, in cooperation with BEREC and NRAs, consider whether such a consolidated reporting approach could enhance efficiency without undermining transparency or effective oversight. Possible avenues could include increased use of simplified templates or extended reporting intervals, while ensuring that the necessary data remain available to assess the continued proportionality and effectiveness of the regulatory framework.

#### *2.4.2. Downsized revenue streams*

The Commission takes note of stakeholders' concerns regarding the reduction in wholesale revenues following the introduction of Union-wide termination rates. It recalls that the purpose of the Delegated Regulation was to ensure that termination rates reflect the efficient costs of providing the service and to remove long-standing divergences across Member States that had led to competitive distortions within the internal market. Before harmonisation, several national regimes applied termination rates above cost-oriented levels, which effectively allowed operators to recover more than the efficient cost of termination. The introduction of the Eurorates has therefore aligned pricing with the cost standard defined in Article 75 of the Code and ensured competitive neutrality across the Union.

The Commission notes that there is no evidence indicating that the application of Eurorates has impaired operators' ability to invest, compete or innovate. Retail prices for consumers have remained stable, while the harmonised framework has improved legal certainty and predictability. Although the move to cost-reflective rates has inevitably reduced wholesale revenues, this outcome is consistent with the Regulation's objective of fostering efficiency and promoting a level playing field in electronic communications markets. The Commission intends to continue monitoring the situation, including in smaller or higher-cost markets, to ensure that the framework remains proportionate and sustainable.

#### *2.4.3. Fraudulent practices and CLI spoofing*

The Commission acknowledges the concerns raised by stakeholders regarding the increase in fraudulent activities, including caller-ID spoofing and manipulation of call origins, often originating from outside the Union. Such practices undermine market integrity, lead to financial losses and harm consumer trust. The Commission underlines that the Delegated Regulation does not alter operators' obligations to comply with applicable Union and national rules on security and fraud prevention. Member States and NRAs retain the authority to impose appropriate technical and operational safeguards, including call-origin verification and CLI authentication mechanisms.

In line with Recital 15 of the Delegated Regulation, the accurate identification of the call origin is essential to ensure the correct application of Union-wide termination rates and to prevent misuse of the regulatory framework. As the origin of a call determines whether the Eurorates apply, Union operators must be able to identify the country of origin of the caller. For this purpose, operators may rely on the country code contained in the CLI. To ensure proper implementation, Union operators should receive a valid CLI assigned to every

incoming call. Consequently, Union operators are not bound to apply Union-wide termination rates to the termination of calls where the CLI is missing, invalid, or fraudulent.

The Commission may, in cooperation with BEREC and NRAs, consider whether further guidance or coordinated measures could help to strengthen fraud prevention and detection, particularly in cross-border contexts. It could also explore whether additional clarifications to the regulatory framework would be appropriate to provide operators with greater legal certainty in addressing systematic or large-scale fraudulent activity.

#### *2.4.4. Reciprocity with non-EU operators*

The Commission notes stakeholders' concerns regarding the absence of reciprocity in relations with non-EU operators, whereby Union operators are required to apply regulated Eurorates while operators from third countries may continue to impose higher termination charges. The Commission recalls that the Delegated Regulation already provides for reciprocity mechanisms under Article 1(4). In particular, Article 1(4)(a) establishes that Union operators shall apply the Eurorates when calls originate from a third country where the corresponding operator applies a termination rate at or below the Union-wide level, while Article 1(4)(b) extends this rule to third countries listed in the Annex to the Regulation as having a regulatory framework aligned with that of the Union. The Commission notes that the Annex is currently empty, as no third countries have yet been identified as fulfilling the criteria set out in Annex III of the Code.

In line with Recital 13 of the Delegated Regulation, it is the responsibility of the third-country operator to provide verifiable information demonstrating that the termination rate it applies is equal to or lower than the Eurorates in order to benefit from the mechanism established in Article 1(4)(a). The Delegated Regulation does not impose any obligation on Union operators to actively verify or monitor the regulatory alignment of third-country operators. Where such verifiable information is not provided, or where termination rates applied by non-EU operators exceed the Union-wide level, Union operators remain entitled to apply any termination rate they consider appropriate towards those third-country operators.

In its Opinion, BEREC acknowledged the continuing lack of transparency and reciprocity with non-EU operators and recommended improving visibility of applicable rates and country coverage. The Commission takes note of these recommendations and may, in cooperation with BEREC and national authorities, explore whether enhanced transparency measures such as the publication of a list of third countries meeting the reciprocity criteria or improved information-exchange mechanisms could further support consistent application of the Regulation and promote balanced commercial relations between Union and non-Union operators.

#### *2.4.5. Transit market*

The Commission takes note of stakeholders' observations concerning unregulated transit services and potential mark-ups that may obscure the true cost of termination. It recalls that the Delegated Regulation applies exclusively to wholesale call termination and does not extend to transit or related ancillary services. This delineation ensures that the cost-based regime remains focused on the termination segment while allowing commercial flexibility in intermediate routing arrangements.

BEREC, in its Opinion, recognised that transit services are outside the scope of the Delegated Regulation and recommended clarifying this distinction to avoid misinterpretation. It also noted that, while certain operators reported limited transparency and varying access to direct interconnection, NRAs should retain powers under national frameworks to address potential anti-competitive behaviour where it arises. BEREC did not propose extending the Regulation to transit services but advised maintaining transparency and monitoring market developments.

Based on the information available to the Commission, the transit market appears to be highly competitive, with observed prices declining over recent years. These developments suggest that competitive market forces continue to function effectively in this segment. The Commission therefore does not intend to pursue further regulatory action in relation to transit services. It remains clear that the Delegated Regulation does not cover transit prices, and any future consideration of this issue would need to be justified by concrete evidence of market failure or systemic distortion

#### *2.4.6. SMS termination*

The Commission takes note of BEREC's observation that the implementation of the amended Article 5a of Regulation (EU) 2015/2120 requiring that, as of 1 January 2029, operators shall not apply different retail prices for domestic and intra-EU communications may give rise to inconsistencies between retail and wholesale pricing for intra-EU SMS services. BEREC highlighted that, in contrast to voice termination, SMS termination rates remain subject to significant variation across Member States, which could result in competitive imbalances once uniform retail pricing is in place.

The Commission acknowledges these considerations and notes that several stakeholders also expressed support for examining whether SMS termination could, in the future, be brought within the scope of a harmonised regulatory framework. At the same time, it is observed that SMS traffic volumes across the Union have declined substantially in recent years and now represent a negligible share of overall communications activity. Moreover, the Commission notes that, at the retail level, SMS has different characteristics from voice calls and it is to a much greater extent exposed to substitution from OTT messaging services and is typically provided in unlimited volumes within bundled offers. Consequently, any potential asymmetries in SMS termination rates are unlikely to have a material impact on competition or consumer outcomes at present.

At this stage, the Delegated Regulation applies exclusively to voice termination services, and the Commission does not intend to extend its scope. However, the Commission may, in the context of future reviews, assess whether the inclusion of SMS termination or the establishment of a distinct harmonised mechanism could be justified based on evidence of persistent market distortion or regulatory fragmentation across the Union. In addition, the Commission may, in the framework of other legislative instruments governing electronic communications, assess the need for regulatory intervention concerning SMS termination, should market developments warrant such consideration.

#### *2.4.7. Technological neutrality and the definition of termination services*

The Commission agrees with BEREC's view that the definition of termination services should remain broad and technologically neutral, applying equally to all forms of interconnection, including 2G, 3G, 4G, 5G, Wi-Fi, or IP-based fixed networks. This approach reflects Recitals (4) and (5) of the Delegated Regulation, which clarify that voice termination encompasses any service used to terminate voice calls by the operator having

both the technical control and legal right to use the called number and to route the call to the recipient.

In line with Recital (6), the cost elements included in the Eurorates should be strictly limited to those directly related to the provision of termination. In particular, interconnection port costs including installation and testing form an essential component of termination and are therefore covered. Conversely, the costs of associated facilities or ancillary services, as well as transit services, fall outside the scope of the Regulation and should not be recovered through termination charges.

Recitals (7) to (9) further clarify the boundaries of the scope by excluding termination of calls to certain non-geographic numbers, such as those used for premium-rate, toll-free or shared-cost services, and numbering ranges for machine-to-machine (M2M) communications, as these do not exhibit the characteristics of a termination monopoly. At the same time, calls to other non-geographic numbers (e.g. fixed nomadic services and access to emergency services) and hybrid services such as “home zone” offerings remain within the scope of the Regulation and should be treated as fixed or mobile termination services depending on the number called.

### **3. REGULATION OF TERMINATION RATES (MARKETS) IN THE UNION**

#### **3.1. The removal of the termination markets from the Recommendation on Relevant Markets in 2020**

In the 2020 Recommendation on Relevant Markets, the Commission assessed the need to maintain the market for wholesale call termination on individual public telephone networks provided at a fixed location (market 1/2014) and the market for wholesale voice call termination on individual mobile networks (market 2/2014) in the list of markets susceptible to *ex ante* regulation. These two markets were listed in the 2014 Recommendation <sup>(23)</sup>.

After recalling that Article 75 of the Code empowered the Commission to adopt a delegated act setting the maximum Union-wide voice termination rates, the recitals of the 2020 RRM clarify that the application of the Union-wide voice termination rates will “limit the ability of mobile and fixed operators to set excessive termination rates”. Hence, “the risk of excessive termination rates, which has been the most serious threat to competition on the termination markets, would disappear” <sup>(24)</sup>. Overall, the Commission concluded that the termination markets no longer meets the three-criteria test at Union level. Therefore, these markets were not listed in the annex of the 2020 RRM.

However, specific national circumstances may justify regulation of the termination markets in some Member States, if the three-criteria test is fulfilled at the national level. Indeed, the introduction of Union-wide voice termination rates might not eliminate all risks to effective competition. This could be the case where NRAs have received complaints from operators that were denied interconnection. This is one scenario where the termination markets might remain regulated with the imposition of remedies, apart from price control obligations <sup>(25)</sup>.

#### **3.2. The evolution of the regulatory situation in the EU since the adoption of the Delegated Regulation and its entry into force on 1 July 2021**

Since the publication of the 2020 RRM in the Official Journal on 29 December 2020 <sup>(26)</sup> and the entry into force of the Delegated Regulation on 1 July 2021, the regulatory situation in the Member States has evolved considerably.

Already prior to the entry into force of the Delegated Regulation, several NRAs had begun to adapt their national frameworks. Germany (BNetzA) <sup>(27)</sup> and Hungary (NMHH) <sup>(28)</sup>, in

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<sup>(23)</sup> Commission Recommendation 2014/710/EU of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 295, 11.10.2014, p. 79).

<sup>(24)</sup> Recital (40) of the 2020 RRM.

<sup>(25)</sup> See Commission Explanatory Note Accompanying the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (SWD(2020) 337 final).

<sup>(26)</sup> OJ L 439, 29.12.2020, pp. 23–31.

<sup>(27)</sup> DE/2021/2299.

<sup>(28)</sup> HU/2021/2321.

relation to the mobile termination market, and Lithuania (RRT) <sup>(29)</sup>, for both fixed and mobile termination markets, removed price control obligations from the remedies imposed on SMP operators.

Following the entry into force of the Delegated Regulation, Slovakia (RU) <sup>(30)</sup> was the first Member State to fully deregulate its termination markets in 2021. In its market analysis, RU conducted the three-criteria test and concluded that the second criterion was not met. RU considered that “the implementation of a single maximum call termination rate throughout the EU, together with the applicable Slovak Law on Electronic Communications, is sufficiently effective to reduce the incentive and ability of operators to act independently”. This reasoning aligned with the Commission’s analysis in the Explanatory Note accompanying the 2020 RRM.

In 2021, no other Member States fully deregulated its termination markets. Poland (UKE) <sup>(31)</sup> reviewed the mobile termination market and concluded that regulation remained necessary due to continuing non-price barriers, despite the application of the Eurorates. UKE argued that despite the price regulation, numerous small operators remain dependent and may face other, non-pricing related obstacles <sup>(32)</sup>. Yet, regulation imposed under the updated market analysis only included non-pricing remedies. The same year, AGCOM in Italy <sup>(33)</sup> reached the conclusion that the three-criteria test was fulfilled on fixed termination market. AGCOM argued that the specific national circumstances made the regulation necessary (i.e. non-inclusion of unmanaged VoIP calls and mobile calls in the retail market reducing indirect constraint on the wholesale markets) in addition to the presence of a dominant operator, TIM, with a market share of around 45%.

In 2022, Austria (TKK) <sup>(34)</sup>, Denmark (DBA) <sup>(35)</sup> and Bulgaria (CRC) <sup>(36)</sup> fully deregulated their termination markets. In Austria, TKK found that the third criterion was not met, while DBA and CRC concluded that the second criterion was not met. In all three cases, NRAs argued that the Delegated Regulation had eliminated the most serious competition problem identified in termination markets, i.e. excessive pricing. The same year, Latvia (SPRK) <sup>(37)</sup> maintained non-price regulation on both termination markets, arguing lack of countervailing buying power and the dominance of one operator. In its comments, the Commission’s underlined that the Delegated Regulation had addressed the risk of excessive pricing and that non-price related issues were less likely to occur. In that context, the Commission urged SPRK to closely monitor the termination markets and reassess its findings prior to the end of the current review cycle.

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<sup>(29)</sup> LT/2021/2322 and LT/2021/2323.

<sup>(30)</sup> SK/2021/2328 and SK/2021/2329.

<sup>(31)</sup> PL/2021/2342.

<sup>(32)</sup> Specifically, UKE mentioned complaints (one in 2019 and two in 2021) it received from fixed operators regarding the conclusion of access agreements between fixed and mobile operators.

<sup>(33)</sup> IT/2021/2352.

<sup>(34)</sup> AT/2022/2366 and AT/2022/2367.

<sup>(35)</sup> DK/2022/2387 and DK/2022/2417.

<sup>(36)</sup> BG/2022/2402 and BG/2022/2403.

<sup>(37)</sup> LV/2022/2379 and LV/2022/2410.

In 2023, Ireland (ComReg)<sup>(38)</sup> and Croatia (HAKOM)<sup>(39)</sup> fully deregulated their termination markets, while Greece (EETT)<sup>(40)</sup> and Spain (CNMC)<sup>(41)</sup> deregulated their mobile termination markets. Finally, Germany (BNetzA)<sup>(42)</sup> concluded that regulation was not deemed necessary for fixed termination. In these cases, NRAs found that the second and, in some cases<sup>(43)</sup>, the third criteria were not met. Similarly to the case mentioned above, they concluded that the Eurorates removed the principal competition concern (i.e. excessive pricing).

BNetzA in Germany<sup>(44)</sup> maintained regulation on mobile termination market. The German notification regarded the identification of a new SMP operator in the mobile termination market. To proceed with the SMP designation, BNetzA first conducted a full three-criteria test and found it to be met. BNetzA considered that “despite the adoption of the Delegated Regulation, [it] identifies a risk of potential indirect refusal of interconnection based on price discrimination<sup>(45)</sup>”. The full set of remedies but price control obligation was therefore imposed on the newly identified SMP operator. The Commission services issued a comments’ letter inviting “BNetzA to monitor the mobile termination market closely and when the conditions are met, proceed without delay to its complete deregulation, at the latest by the next market review cycle, expected in 2025”.

NMHH in Hungary<sup>(46)</sup> also maintained regulation, but on the fixed termination market. NMHH considered that the Delegated Regulation does not prevent non-price related distortive practices. NMHH considered that the specific characteristics<sup>(47)</sup> of the Hungarian market increase the likelihood of these practices to occur. As under the German case mentioned above, the Commission services issued a comments’ letter urging “NMHH to closely monitor the fixed termination markets and reconsider the need for continued regulation, prior to the end of the current market review period”.

In 2024, Romania (ANCOM)<sup>(48)</sup>, Belgium (IBPT)<sup>(49)</sup> and Cyprus (OCECPR)<sup>(50)</sup> fully deregulated their termination markets. ANCOM and IBPT found that the second criterion

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<sup>(38)</sup> IE/2023/2432 and IE/2023/2433.

<sup>(39)</sup> HR/2023/2439 and HR/2023/2440.

<sup>(40)</sup> EL/2023/2426.

<sup>(41)</sup> ES/2023/2429.

<sup>(42)</sup> DE/2023/2470 and DE/2023/2471.

<sup>(43)</sup> BNetzA and HAKOM found that both, the second and the third criteria were not met. Consequently, they highlighted the competition authority’s ability to intervene in a timely manner with *ex post* tools.

<sup>(44)</sup> DE/2023/2425.

<sup>(45)</sup> “By only setting up maximum charges for termination prices, the Delegated Regulation leaves space for major operators to negotiate lower prices with smaller operators while charging the maximum prices to terminate calls on their own networks. Therefore, interconnection tenders may be designed in such a way that it is, in fact, equivalent to a refusal of access”.

<sup>(46)</sup> HU/2023/2445.

<sup>(47)</sup> NMHH pointed out to the large number of fixed telephony operators and the size difference among them, resulting in diverse set of relations between the parties.

<sup>(48)</sup> RO/2024/2490 and RO/2024/2491.

<sup>(49)</sup> BE/2024/2513 and BE/2024/2514.

<sup>(50)</sup> CY/2024/2532 and CY/2024/2533.

was not met, while OCECPR found that both the second and third criteria failed: (i) the Delegated Regulation solved the main problem of excessive prices and (ii) NRAs have the relevant tools to address non-price related issues, if they were to occur. In Cyprus, both the second and third criteria were not met.

The same year, the Dutch regulatory authority (ACM) <sup>(51)</sup> conducted a market analysis on the two termination markets in the Netherlands and concluded that regulation is still deemed required. ACM demonstrated that the Delegated Regulation did not fully address non-price related issues experienced in the Dutch market including (i) refusal of direct access, (ii) non-price tactics such as withholding information, delaying access, imposing unfair conditions, quality discrimination, etc. and (iii) price-related issues where providers like KPN, with exclusive facilities, can charge above-cost fees for necessary services. To support its findings with strong evidence, ACM referred to the complaints it received <sup>(52)</sup>. These situations could only be solved via *ex ante* intervention, ACM argued. ACM concluded that both the second and third criteria were met. ACM imposed (i) access and (ii) transparency obligations on all the SMP operators. Additionally, price control obligation (i.e. monthly tariffs) was also imposed on KPN for the provision of associated facility collocation, one service falling outside of the scope of the Delegated Regulation. In its comments letter, the Commission acknowledged ACM's decision to maintain regulation while inviting the Dutch NRA to closely monitor the markets.

In 2024, Sweden (PTS) <sup>(53)</sup> notified its draft market analysis of the termination markets. PTS's analysis reached the preliminary conclusion that the three-criteria test was passed on both markets in Sweden. Regarding the second criterion, PTS argued that the Delegated Regulation did not address other significant price and non-price distortive practices (e.g. offering different conditions to different originating operators, refusal of indirect interconnection if there is no profitable business interest or if the access seeker's business does not directly compete with the access provider's offering). Additionally, PTS highlighted the possibility for operators to circumvent direct interconnection by enabling higher tariffs not capped by the Delegated Regulation (i.e. traffic would be routed through an unregulated transit market). PTS conducted a so-called "proportionality analysis". PTS determined that regulating small markets with limited subscriptions offers leads to reduced benefit for competition in the retail fixed telephony market while imposing significant administrative burden on small operators. To address this concern, PTS set a threshold of 40 000 subscription as the minimum market size for justified *ex ante* regulation on the fixed termination market and of one million subscriptions for the mobile termination market. After identifying the SMP operators, meeting the required thresholds, PTS proposed to impose the following remedies: (i) non-discrimination obligations, (ii) obligation of general conditions of supply, (iii) obligation to publish information on all fixed and mobile SMP operators. The Commission raised serious doubts <sup>(54)</sup> about the three-criteria test justifying *ex ante* regulation. While acknowledging that the termination markets can still be regulated, if justified, NRAs must provide evidence (e.g. complaints,

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<sup>(51)</sup> NL/2024/2546 and NL/2024/2547.

<sup>(52)</sup> ACM provided evidence that providers have circumvented termination rates by denying direct access to interconnection, enabling them to charge excessive transit fees on top of the termination rates. Additionally, in the 2022-2023 period, ACM had 17 enforcement procedures ongoing and 4 complaints concerning the different access issues (i.e. regarding access obligation) in the termination markets between different stakeholders.

<sup>(53)</sup> SE/2024/2555 & SE/2024/2556.

<sup>(54)</sup> C(2024)9206.

dispute resolutions or other enforcement actions) of threat to competition in the absence of regulation. The Commission concluded that PTS had not presented compelling evidence<sup>(55)</sup> of potential non-competitive behaviour in wholesale call termination markets, also from the forward-looking perspective. PTS withdrew its notifications during the Phase II investigation.

In 2025, Czechia<sup>(56)</sup>, Slovenia<sup>(57)</sup>, Estonia<sup>(58)</sup> and Finland<sup>(59)</sup> proposed to fully deregulate both termination markets, while Italy<sup>(60)</sup> and Germany<sup>(61)</sup> deregulated the mobile termination markets in their respective country. Finally, Spain<sup>(62)</sup> deregulated its fixed termination market.

*Table 1: State of Play on regulation of the termination markets since the introduction of the Delegated Regulation on 1 of July 2021*

<b>Full deregulation (M1 and M2)</b>	<b>Only M1 deregulation</b>	<b>Only M2 deregulation</b>	<b>Regulation on the basis of a market analysis conducted after 1/07/2021</b>
SK, AT, DK, BG, IE, HR, RO, BE, CY, DE, CZ, SI, EE, FI, ES.	<i>None</i>	EL, IT.	PL (M2/2014), IT (M1/2014), LV, HU (M1/2014), NL.

Source: European Commission’s Article 32 notifications since 1 July 2021 (as of the end of 2025).

Overall, since the entry into force of the Delegated Regulation 15 Member States have fully deregulated their termination markets based on a full market analysis. Two Member States deregulated the mobile termination market only, maintaining the regulation on fixed termination, while five Member States concluded that regulation should be maintained on at least one of the two markets.

A specific case is that of France, which conducted a full market analysis of both termination markets in 2017 and concluded that regulation remained necessary<sup>(63)</sup>. Yet, the final regulatory decision was valid for a period of 3 years, until December 2020. Following the adoption of the Delegated Regulation, ARCEP decided not to carry out another market analysis, leading to the automatic deregulation of both termination markets.

<sup>(55)</sup> Specifically, in its response to the request for information, PTS acknowledged the complete absence of complaints or enforcement procedures concerning termination markets.

<sup>(56)</sup> CZ/2025/2557 and CZ/2025/2558.

<sup>(57)</sup> SI/2025/2565 and SI/2025/2580.

<sup>(58)</sup> EE/2025/2597 and EE/2025/2598.

<sup>(59)</sup> FI/2025/2601-2602.

<sup>(60)</sup> IT/2025/2561.

<sup>(61)</sup> DE/2025/2567.

<sup>(62)</sup> ES/2025/2604.

<sup>(63)</sup> Notified under cases FR/2017/2028-2029.

Among the notified market analyses carried out since the entry into force of the Delegated Regulation, at least three Member States imposed price control obligations on ancillary services <sup>(64)</sup>. This includes Italy <sup>(65)</sup>, Latvia <sup>(66)</sup> and the Netherlands <sup>(67)</sup>.

In addition, among the market analyses notified to the Commission since 1 July 2021, at least six Member States deregulating the termination markets introduced a sunset period. Ireland <sup>(68)</sup> provided a six-month period for the SMP operator Eir to lift interconnection obligation. Romania <sup>(69)</sup> set a 12-month period, Italy <sup>(70)</sup> in M2/2014 and Spain <sup>(71)</sup> in market 1/2014 both provided 6 months, and Slovenia <sup>(72)</sup> 30 days for the two markets. Lastly, Finland <sup>(73)</sup> set a transitory period until the 1 January 2026. Regulatory practices across the European Union show varying approaches regarding the necessity and duration of sunset periods.

Finally, the modernization of networks and the transition towards IP-based communication were frequently used as an argument to support deregulation. Several NRAs, including those in Austria <sup>(74)</sup>, Romania <sup>(75)</sup>, Belgium <sup>(76)</sup> and Estonia <sup>(77)</sup>, argued that these developments have further reduced the likelihood of market failures and contributed to the conclusion that the second criterion of the three-criteria test is no longer met.

## **4. RATES ASSESSMENT**

### **4.1. Introduction to cost principle and cost modelling**

Taking account of the characteristics of voice termination markets, the Code requires that the costs of termination services are calculated on the basis of forward-looking long-run incremental costs (LRIC). LRIC models include only those costs that are directly caused by the provision of a defined increment. This incremental cost approach allocates only efficiently incurred costs that would not be sustained if the service included in the increment was no longer produced (i.e. avoidable costs). Such a methodology promotes

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<sup>(64)</sup> Falling outside of the scope of the Delegated Regulation.

<sup>(65)</sup> IT/2021/2352.

<sup>(66)</sup> SPRK maintained price control and cost accounting separation for the ancillary service of installation, connection and subscription of an interconnection line. Notified under case LV/2022/2379 for market 2/2014. Similar case notified under LV/2022/2410 imposing price control on ancillary services on market 1/2014.

<sup>(67)</sup> Additional monthly tariff on KPN for the provision of the associated facility collocation. Notified under case NL/2024/2547.

<sup>(68)</sup> IE/2023/2432-2433.

<sup>(69)</sup> RO/2024/2513-2514.

<sup>(70)</sup> IT/2025/2561.

<sup>(71)</sup> ES/2025/2604.

<sup>(72)</sup> SI/2025/2565 and SI/2025/2580.

<sup>(73)</sup> FI/2025/2601-2602.

<sup>(74)</sup> AT/2022/2366-2367.

<sup>(75)</sup> RO/2024/2490-2491.

<sup>(76)</sup> BE/2024/2513-2514.

<sup>(77)</sup> EE/2025/2597-2598.

efficient production and consumption and minimises potential competitive distortions on the termination markets.

Avoidable costs are the difference between the identified total long-run costs of an operator providing its full range of services and the identified total long-run costs of that operator providing its full range of services except for the wholesale voice termination service supplied to third parties (i.e. stand-alone cost of an operator not offering termination to third parties). To ensure an appropriate attribution of the costs, a distinction needs to be made between those costs that are traffic-related, i.e. all those fixed and variable costs which rise with increased levels of traffic, and those costs that are non-traffic-related, i.e. all those costs which do not rise with increased levels of traffic. To identify the avoidable costs relevant for wholesale voice termination, non-traffic-related costs should be disregarded. Moreover, it is appropriate to attribute traffic-related costs firstly to other services (e.g. call origination, SMS, MMS, broadband, leased lines) with wholesale voice termination being the final service to be taken into account. The cost allocated to the wholesale voice termination service should thus be equal to the additional cost incurred to provide the service. Consequently, cost accounting based on a BU-LRIC approach for wholesale voice termination services in fixed and mobile markets should allow only the recovery of costs which would be avoided if a wholesale voice termination service was no longer provided to third parties.

The further termination rates move away from incremental costs, the greater the competitive distortions between fixed and mobile markets and/or between operators with asymmetric market shares and traffic flows. Therefore, and in line with Annex III of The Code, it is appropriate to apply a pure LRIC approach, whereby the relevant increment is the wholesale voice termination services and includes only avoidable costs. This approach also allows for the recovery of all fixed and variable costs that are incremental to the provision of the wholesale call termination service over the long run, thereby facilitating efficient cost recovery. Annex III of the Code further provides that:

*“the evaluation of efficient costs shall be based on current cost values; the cost methodology to calculate efficient costs shall be based on a bottom-up modelling approach using long-run incremental traffic-related costs of providing the wholesale voice termination service to third parties”*

Accordingly, the cost model methodology for the single maximum Union-wide voice termination rate shall be based on a Bottom Up Long Run Average Incremental (BU-LRIC) approach. The cost model assumes the use of efficient, forward-looking technology that hypothetical new entrant would deploy when building a network today. Article 75 of the Code and Annex III set out in detail the requirements for such a cost model, drawing on the principles established in the 2009 Termination Rates Recommendation <sup>(78)</sup>.

Annex III requires that costs of wholesale voice termination rates are to be based on the principles of recovery of costs incurred by an efficient operator, calculated using the pure BU-LRIC approach. Only costs directly related to traffic that would be avoided in the absence of the provision of a wholesale voice termination service shall be allocated to the cost of terminating a call. In essence, any cost not directly related to termination (such as radio spectrum fees, commercial costs not directly related to the provision of wholesale voice termination and capacity-related costs for services other than termination) should be

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<sup>(78)</sup> Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, OJ L 124, 20.5.2009, pp. 67–74.

excluded from the costs of termination services. For the mobile network, the efficient operator modelled should be set to a market share not below 20%. For both the mobile and fixed network, the technology modelled shall be forward looking, based on an IP core network.

#### **4.2. Mobile Termination Rate (MTR)**

In order to assess the cost of providing wholesale mobile termination rate, the Commission commissioned an independent study. The objective of the study was to build on the experience of the previous cost model study SMART 2017/009 <sup>(79)</sup> and enhance the existing bottom-up cost model to estimate the efficient costs of providing wholesale voice call termination services by mobile network operators in the EEA, under the current market conditions. The study has been conducted Axon.

The Axon cost model estimates the costs of providing wholesale mobile roaming services as well as voice termination in 23 EU/EEA countries <sup>(80)</sup>. Each cost model contains a number of adaptable scenarios, allowing the Commission services to evaluate different scenarios in each country. Although the Axon cost model estimates costs for both wholesale roaming and termination, for the purpose of this Review Document and Delegated Regulation, only the parts related to voice termination will be discussed <sup>(81)</sup>.

In addition, the cost model also covers 5G services that have not been covered by the old cost model. Additional information on the methodological approach followed and the results of the cost model are included in the full list of materials published with the Axon's cost model <sup>(82)</sup>.

The models would rely on country-specific input where relevant and, where not, on average/common values across the EU/EEA. On 8 January 2024 the first draft cost model was shared with stakeholders for consultation, followed by a second version of the draft model shared on 17 April 2024 for a second round of consultation. The relevant comments and suggestions received during both consultations were implemented in the draft final model, which was presented to stakeholders at a second workshop on 4 July 2024. The cost model was then finalised and published on 18 December 2024 <sup>(83)</sup>.

The cost model has been updated again in July 2025 <sup>(84)</sup> to incorporate the latest available data for 2023 and 2024, although this update did not involve any methodological changes, only revisions to the data inputs to ensure the model remains current and accurate.

The Axon cost model is based on a number of methodological choices. First of all, the model is bottom-up, calculating the provision of a service under a given set of methodologies and scenarios. A bottom-up model involves a reasonable approximation of the network that a reference operator would need in order to meet the coverage and capacity

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<sup>(79)</sup> Study SMART 2017/0091: “Assessment of the cost of providing mobile telecom services in the EU/EEA countries”, Axon Partners Group Consulting, published on 22 July 2019, available [here](#).

<sup>(80)</sup> Iceland, Liechtenstein, Netherlands, Finland, Estonia, Latvia and Lithuania decided not to participate in the data collection.

<sup>(81)</sup> For a general introduction to the cost model we refer to the full publication, available [here](#).

<sup>(82)</sup> Ibid.

<sup>(83)</sup> Ibid.

<sup>(84)</sup> [2025 Update of the mobile cost model for roaming and voice call termination in the EU | Shaping Europe's digital future](#).

requirements of the users. It therefore produces an approximation of the costs that such an operator would bear and provides service-level results under different scenarios. For termination, the Axon cost model allocates costs according purely to the LRIC approach described in the section above.

To estimate the efficient cost of terminating a mobile call in a hypothetical European mobile network operator, based on estimates of the Axon cost model, each parameter needs to be assessed in order to propose the most suitable scenario. As mentioned in the section above, during the entire process, Axon and the Commission services have consulted and discussed scenarios with stakeholders and the multiple workshops. The different scenarios as defined in the cost model are economic depreciation, definition of increments under a LRIC cost standard, traffic patterns and seasonal behaviours, and domestic data demand forecasts. Based on the feedback received throughout the process, a final setting for each scenario was proposed and is described below. All 72 results based on different scenarios are published and a detailed assessment is available in the accompanying documents to the cost model <sup>(85)</sup>.

The combination of scenarios of the Axon model most supported by stakeholders is also considered by the Commission services as the appropriate basis for setting the mobile single maximum Union-wide voice termination rate. The arguments for the choice of each specific scenario are described here below, with the chosen scenario in *italic*:

- Annualisation criteria (Economic depreciation based on demand)
  - The annualisation criteria most preferred by stakeholders is to depreciate assets based on the demand they are expected to serve. Two production factors are included in the model to assess the results produced by the economic depreciation. One is depreciation based on “revenues”, where the asset is depreciated on the revenue it is expected to generate.
  - 56% of stakeholders preferred depreciation based on demand.
- Roaming increment (Specific roaming increment)
  - Treats the mobile roaming increment separately from other non-regulated domestic services, although recognising that roaming services should also contribute to the recovery of joint and common costs.
  - 71% of stakeholders agreed with this approach and a specific increment for roaming is considered.
- Threshold to identify seasonal patterns (*50%*)
  - Different preferences across stakeholders were observed for this scenario. The alternative to 50% as a threshold is 10% and 30%. This scenario has a larger impact on estimates for roaming and does not change the outcome for voice termination relevant for the purposes of the Delegated Regulation.
  - 64% of stakeholders preferred this approach, setting the seasonality to 50%.
- Demand forecast for data (*conservative*)
  - Setting this scenario to conservative, assumes a lower growth of the domestic data service as compared to the base case scenario. This approach is supported by 54% of the stakeholders. The Commission services also support this scenario, as a more conservative approach in terms of the expected data development is more likely to ensure cost recovery, also if demand does not develop as expected.

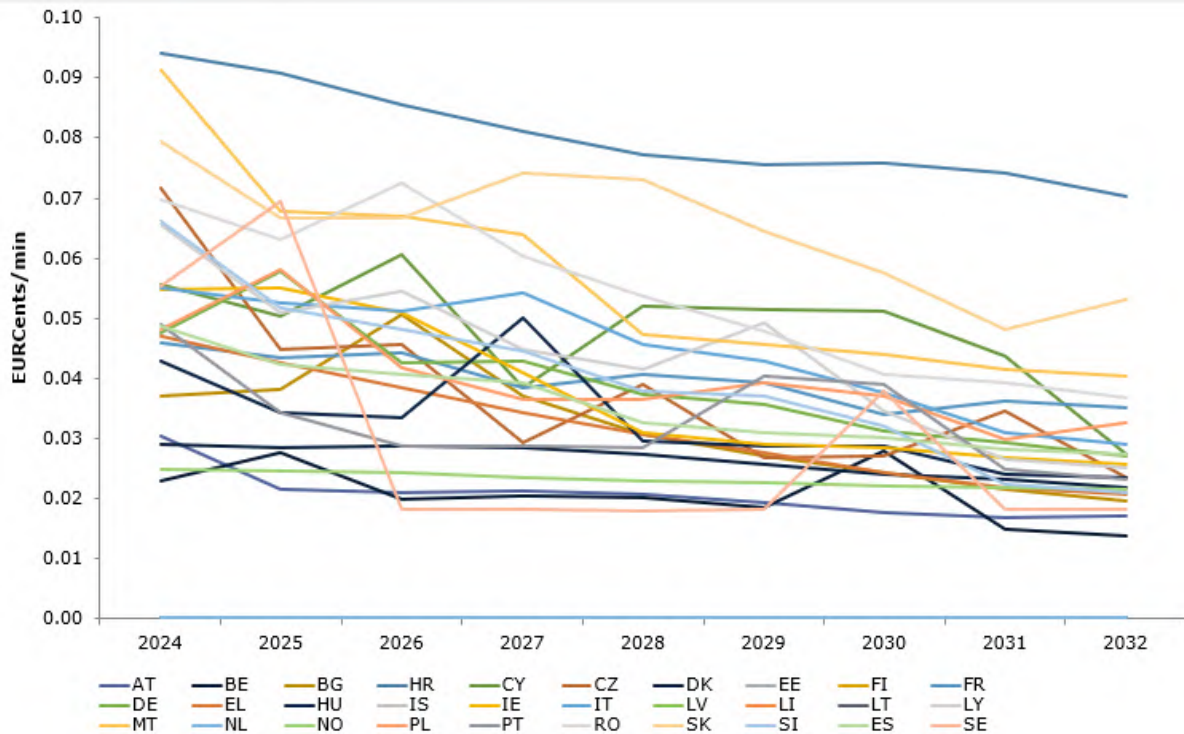
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<sup>(85)</sup> [Finalisation of the mobile cost model for roaming and the delegated act on a single EU-wide mobile voice call termination | Shaping Europe’s digital future.](#)

- This is important when approaching the setting of wholesale caps based on projections of either costs or prices, which will be subject to uncertainties regarding the accuracy of such projections, in particular further into the future.

Figure 2 presents the estimates of the Axon cost model for each of the modelled Member States. These results are obtained under the scenario supported by most stakeholders. As seen, the MTRs throughout the period range from around 0.09 EURcent/min to just under 0.02 EURcent/min.

Figure 2: Axon cost model estimated MTRs per country (most preferred scenario)



Source: Axon, CNECT/2022/OP/0065

Detailed cost estimates for MTRs under the chosen combination of scenarios in the Axon cost model per Member State can be seen in Table 2 below.

Table 2: Cost estimates for MTRs under the chosen combination of scenarios in the Axon model (in Euro cent/min)

COUNTRY	2024	2025	2026	2027	2028	2029	2030	2031	2032
Austria	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Belgium	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.01	0.01
Bulgaria	0.04	0.04	0.05	0.04	0.03	0.03	0.02	0.02	0.02
Croatia	0.09	0.09	0.09	0.08	0.08	0.08	0.08	0.07	0.07
Cyprus	0.06	0.05	0.06	0.04	0.05	0.05	0.05	0.04	0.03
Czech Republic	0.07	0.04	0.05	0.03	0.04	0.03	0.03	0.03	0.02
Denmark	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02
Estonia									
Finland									
France	0.05	0.04	0.04	0.04	0.04	0.04	0.03	0.04	0.04
Germany	0.05	0.06	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Greece	0.05	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Hungary	0.04	0.03	0.03	0.05	0.03	0.03	0.03	0.02	0.02
Iceland									
Ireland	0.05	0.05	0.05	0.04	0.03	0.03	0.03	0.03	0.03
Italy	0.06	0.05	0.05	0.05	0.05	0.04	0.04	0.03	0.03
Latvia									
Liechtenstein									
Lithuania									
Luxembourg	0.07	0.05	0.05	0.04	0.04	0.05	0.03	0.03	0.03
Malta	0.09	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04
Netherlands									
Norway	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Poland	0.05	0.06	0.04	0.04	0.04	0.04	0.04	0.03	0.03
Portugal	0.05	0.03	0.03	0.03	0.03	0.04	0.04	0.02	0.02
Romania	0.07	0.06	0.07	0.06	0.05	0.05	0.04	0.04	0.04
Slovakia	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.05
Slovenia	0.07	0.05	0.05	0.04	0.04	0.04	0.03	0.02	0.02
Spain	0.05	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03
Sweden	0.06	0.07	0.02	0.02	0.02	0.02	0.04	0.02	0.02

Note: Iceland, Liechtenstein, Netherlands, Finland, Estonia, Latvia and Lithuania decided not to participate in the data collection. The Axon cost model is therefore does not provide estimates for these countries.; Source: Axon, CNECT/2022/OP/0065

### 4.3. Assessment of the MTR in relation to estimated costs

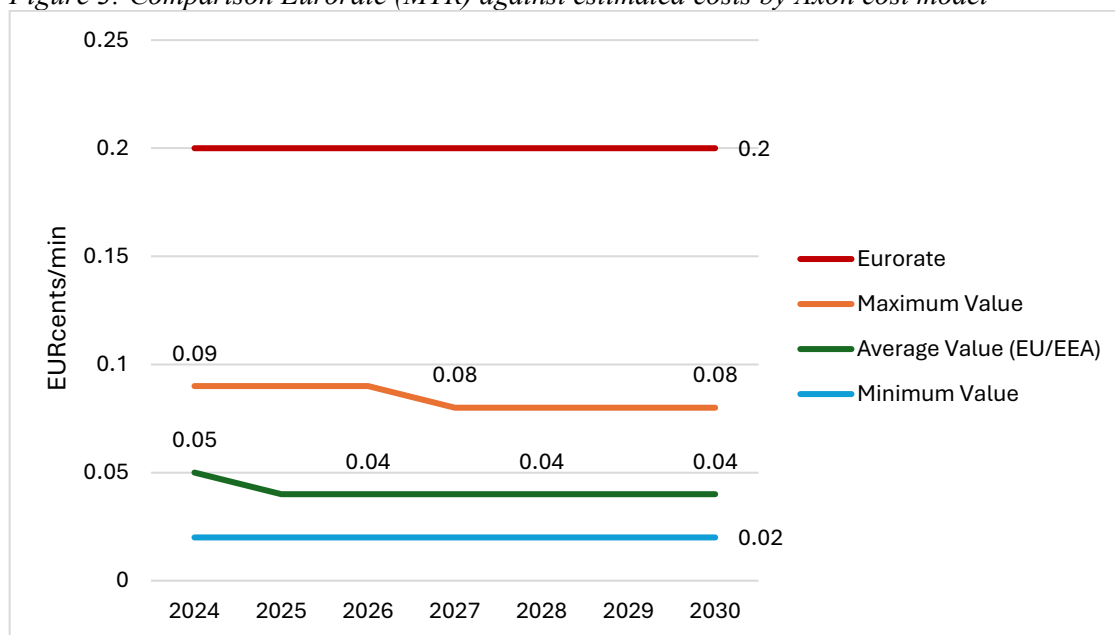
The Delegated Regulation’s establishment of a Union-wide termination rate (Eurorate) of 0.2 EURcent per minute, effective 1 January 2024, has been assessed against cost estimates derived from Axon’s cost model. *Figure 3* presents the results of this assessment, comparing voice termination unit costs with the Eurorate MTR over the period 2024–2030.

Throughout the assessed period, the Eurorate remains fixed at 0.2 EURcent per minute, which is more than double the highest estimated cost calculated by the Axon model. The maximum estimated cost decline from 0.09 EURcent per minute in 2024 to approximately 0.08 EURcent per minute from 2027 onwards, while average costs fall from 0.05 to 0.04 EURcent per minute. The minimum estimated cost remains stable at 0.02 EURcent per minute.

This comparison demonstrates a substantial margin between the Eurorate and all cost estimates, including the upper bound, confirming that the rate is set at a level that ensures full cost recovery for operators across the Union. The findings indicate that the Eurorate

provides a comfortable buffer above estimated efficient cost levels, supporting the financial viability of mobile voice termination services.

Figure 3: Comparison Eurorate (MTR) against estimated costs by Axon cost model



Source: Axon, CNECT/2022/OP/0065

At the same time, given the consistent downward trend in modelled costs, the analysis suggests that, subject to further detailed assessment and continuous monitoring of market and cost developments, there may be economic scope to consider future adjustments to the mobile termination rate. Any such considerations should remain guided by the principles of cost recovery, efficiency, and long-term market sustainability.

#### 4.4. Fixed Termination Rate

The Delegated Regulation has established FTR at 0.07 EURcent per minute. At the time of adoption, the underlying analysis concluded that there was no need for a glide path when introducing a single FTR, unlike in the case of MTRs. This decision was based on the observation that regulated FTRs across Member States were already closely aligned with the level derived from the Commission’s cost model.

Moreover, given that fixed telephony services and wholesale fixed termination rates have not undergone any major technological advancements and considering that traditional fixed telephony is increasingly being replaced by alternative communication technologies, the Commission considers the existing approach appropriate. For the assessment of the FTR, the Commission envisages therefore to continue relying on the existing cost model covering wholesale fixed termination services, while taking into account market and technological developments.

The existing cost model, developed under SMART 2018/0014<sup>(86)</sup>, is based on a hypothetical efficient operator deploying an IMS (IP Multimedia Subsystem) network for

<sup>(86)</sup> Study (SMART 2018/0014): “Assessment of the cost of providing wholesale voice call termination services on fixed networks in the EU/EEA countries”, published on 26 November 2019, available [here](#).

the <sup>(87)</sup> provision of fixed voice services. The cost model covers the period 2015–2025 and incorporates projections derived from historical traffic data, stakeholder input, and observed technological developments. Over this period, the results indicate a high degree of cost stability and convergence among Member States, reflecting the structural maturity of fixed voice termination markets across the Union. These markets have undergone a gradual transformation through the transition to all-IP and fibre-based infrastructures, resulting in a harmonised and efficient cost environment.

Empirical evidence confirms this evolution. Between 2019 and 2021, a moderate decline in estimated unit costs was observed, largely attributable to efficiency gains from the optimisation of network architectures. From 2022 onwards, estimated costs have stabilised at consistently low levels, with only minimal variation across years and Member States. By 2024–2025, cost estimates across the Union fall within a narrow range of approximately 0.028 to 0.068 EURcent per minute, demonstrating substantial convergence and reflecting the efficiency frontier achieved by modern fixed networks.

As shown in *Table 3* and *Figure 4*, the highest estimated cost of providing the fixed termination service throughout the entire modelled period has remained below the regulated Union-wide fixed Eurorate of 0.07 EURcent per minute. This consistent margin confirms that the FTR continues to ensure full cost recovery for an efficient operator in all Member States while avoiding overcompensation. For 2025, the model forecasts an average unit cost of 0.059 EUR cent per minute, reinforcing the conclusion that the current FTR remains safely above cost levels and provides a reasonable buffer to accommodate national cost variations and operational contingencies.

The sustained alignment between estimated costs and the regulated rate also supports the finding that the FTR remains consistent with the principles of cost orientation, efficiency, and proportionality as set out in Article 75 and Annex III of the European Electronic Communications Code. Given the maturity of fixed telephony networks and the ongoing integration of voice services into broadband and fibre infrastructures, no material upward cost pressures are expected beyond 2025. The incremental cost of carrying voice traffic is increasingly marginal, while efficiency gains from network consolidation continue to offset declining call volumes.

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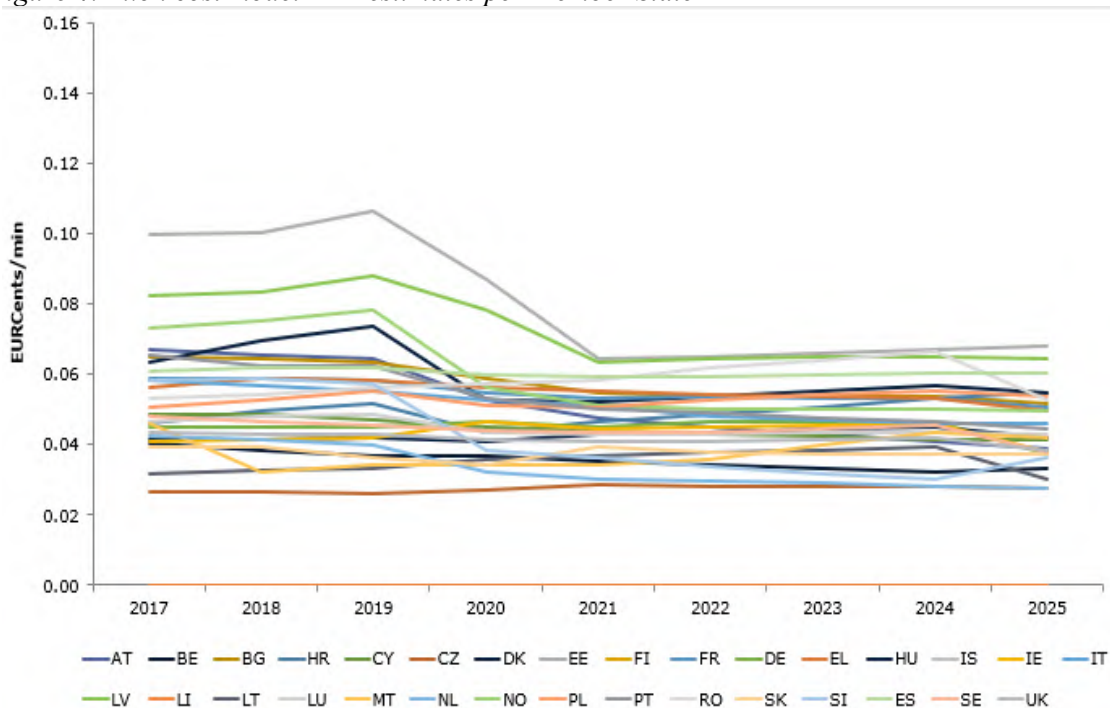
<sup>(87)</sup> IP Multimedia Subsystem is a modern technology delivering IP multimedia services. Compared to the previous circuit-switched network, IMS is a fully IP packet switched network.

Table 3: Cost estimates for FTRs under the chosen combination of scenarios in the Axon model (in EUR cents/min)

Member State	2019	2020	2021	2022	2023	2024	2025
Austria	0.064	0.053	0.047	0.045	0.043	0.041	0.039
Belgium	0.037	0.037	0.035	0.034	0.033	0.032	0.033
Bulgaria	0.063	0.059	0.055	0.054	0.054	0.054	0.052
Croatia	0.052	0.044	0.047	0.049	0.051	0.053	0.055
Cyprus	0.047	0.045	0.044	0.043	0.043	0.042	0.042
Czech Republic	0.026	0.027	0.028	0.028	0.028	0.028	0.028
Denmark	0.074	0.053	0.052	0.054	0.055	0.057	0.055
Estonia	0.107	0.087	0.065	0.065	0.066	0.067	0.068
Finland							
France	0.058	0.055	0.053	0.054	0.053	0.053	0.050
Germany	0.045	0.047	0.045	0.046	0.046	0.047	0.038
Greece	0.058	0.057	0.055	0.054	0.054	0.053	0.050
Hungary	0.042	0.041	0.043	0.044	0.045	0.045	0.042
Iceland							
Ireland	0.042	0.047	0.045	0.045	0.046	0.046	0.038
Italy	0.055	0.053	0.051	0.048	0.047	0.046	0.046
Latvia	0.088	0.078	0.064	0.064	0.065	0.065	0.065
Liechtenstein							
Lithuania	0.033	0.036	0.037	0.038	0.038	0.039	0.030
Luxembourg	0.049	0.043	0.043	0.043	0.043	0.044	0.043
Malta	0.034	0.034	0.034	0.036	0.040	0.043	0.042
Netherlands	0.040	0.032	0.030	0.030	0.029	0.028	0.028
Norway	0.078	0.056	0.051	0.050	0.050	0.050	0.050
Poland	0.055	0.051	0.051	0.053	0.054	0.055	0.054
Portugal	0.062	0.053	0.050	0.049	0.048	0.046	0.045
Romania	0.056	0.057	0.058	0.062	0.064	0.066	0.053
Slovakia	0.037	0.034	0.039	0.038	0.037	0.037	0.037
Slovenia	0.057	0.038	0.036	0.034	0.032	0.030	0.036
Spain	0.062	0.060	0.059	0.060	0.060	0.060	0.060
Sweden	0.046	0.044	0.043	0.044	0.044	0.045	0.038
United Kingdom	0.043	0.042	0.041	0.041	0.041	0.042	0.039

Source: Axon, SMART 2018/0014

Figure 4: Axon cost model FTR estimates per Member State



Source: Axon, SMART 2018/0014

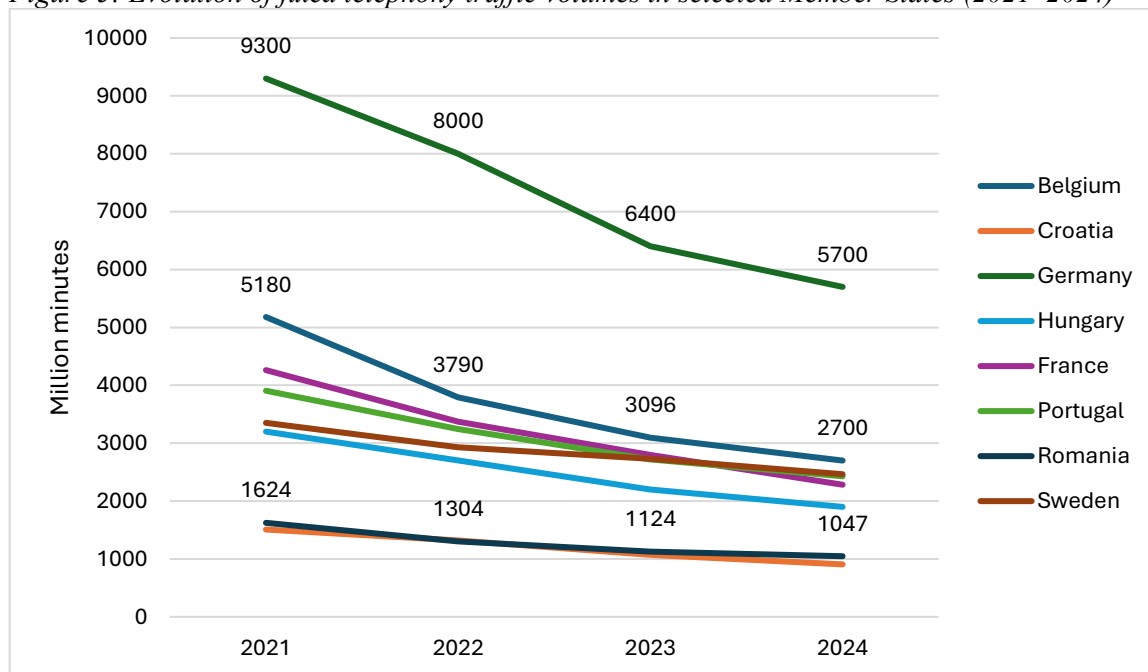
Technological and market developments further reinforce this assessment. *Figure 5* illustrates the continuous decline in fixed telephony traffic across the Union, reflecting long-term substitution effects as end-users increasingly rely on mobile voice services and internet-based communication platforms (e.g. VoIP, OTT applications). The ongoing reduction in traditional fixed voice volumes represents a structural and sustained trend, which is expected to persist in the medium to long term.

At the same time, network operators are completing the migration to all-IP architectures, whereby voice is provided as an ancillary function within multi-service broadband networks rather than through separate legacy infrastructures. This transformation has significantly improved operational efficiency by consolidating service delivery and reducing the incremental cost of providing voice termination.

The widespread deployment of fibre infrastructure has further enhanced efficiency and service quality, offering greater bandwidth, lower latency, and improved reliability. As fibre networks are primarily dimensioned to support broadband services, the incremental cost of carrying voice traffic has become marginal, resulting in a structural decoupling between cost levels and voice-specific demand. Consequently, even as voice traffic volumes decline, the average unit cost of fixed termination is expected to remain broadly stable, as capacity and investment decisions are increasingly driven by broadband rather than voice services.

Moreover, the progressive copper switch-off across Member States is not expected to generate upward cost pressure on termination rates. On the contrary, the transition to fully IP-based, fibre-dominated networks is likely to maintain or further improve efficiency levels over time, reinforcing the conclusion that current fixed termination rates remain sustainable and aligned with cost recovery principles.

*Figure 5: Evolution of fixed telephony traffic volumes in selected Member States (2021–2024)*



Source: NRAs data, annual reports 2021 - 2024

#### **4.5. Conclusion – Rates assessment**

The assessment confirms that the Union-wide termination rates established under Delegated Regulation remain appropriate and consistent with cost-orientation principles. Both the MTR of 0.2 EURcent per minute and the FTR of 0.07 EURcent per minute are set above the cost levels estimated by the Commission's cost models, allowing for full cost recovery by efficient operators across the Union.

Model estimates for the period 2024–2030 indicate that the MTR provides a substantial margin above the highest calculated unit costs, while the FTR remains close to the long-term average cost level observed in fixed networks. In fixed communications, the migration towards IP-based and fibre infrastructures has led to a gradual integration of voice services within multi-service broadband networks. As a result, the incremental cost of providing voice termination is low and relatively stable over time.

The findings confirm that the Delegated Regulation continues to meet its objectives of ensuring cost-reflective, harmonised termination rates across the Union, reducing competitive distortions and providing regulatory predictability.

At the same time, the analysis suggests that there is some economic space for possible future adjustments, particularly in the case of mobile termination, where modelled costs show a gradual downward trend. Any such consideration would require careful monitoring of market and cost developments and should be based on a comprehensive assessment of proportionality, sustainability and investment conditions.

In the current context, the existing Eurorates remain appropriate and provide a stable framework that balances cost efficiency with regulatory simplicity and legal certainty.

## 5. CONCLUSION

The review confirms that the Delegated Regulation has achieved its core objectives of harmonising wholesale voice termination rates, ensuring cost orientation, and facilitating the gradual deregulation of national termination markets. The establishment of single Union-wide termination rates has effectively eliminated cross-border price disparities and removed the need for separate national cost models, thereby promoting competitive neutrality and legal certainty across the internal market.

Since its entry into force on 1 July 2021, the regulatory landscape in the Union has changed significantly. The majority of NRAs have fully deregulated their fixed and mobile termination markets, concluding that the implementation of Union-wide Eurorates has addressed the main competition concern previously identified. Namely, the risk of excessive pricing. This development is fully consistent with the objective outlined by the Commission in the Explanatory Memorandum accompanying the 2020 Recommendation on Relevant Markets, which anticipated that the adoption of a single Union-wide Eurorates would render ex ante price regulation unnecessary in most Member States.

In cases where regulation has been maintained, NRAs have generally focused on non-price related issues such as access, transparency, or dispute resolution. These limited interventions confirm that the harmonised cost-based framework continues to operate effectively and proportionately, providing the necessary safeguards without imposing undue regulatory burdens.

The targeted public consultation and BEREC's opinion both confirm widespread support for the current Eurorate levels and the overall functioning of the framework. Stakeholders recognise the benefits of harmonisation and predictability, while also pointing to specific operational challenges, particularly regarding reciprocity with non-EU operators, fraudulent traffic, and transparency in transit arrangements. The Commission takes note of these issues and, together with BEREC and NRAs, may explore whether additional transparency or information-sharing measures (subject to compliance with competition law) could enhance the consistent application of the Regulation.

The updated cost assessments demonstrate that the Eurorates remain well above modelled efficient cost levels, ensuring full cost recovery for operators across the Union. The analysis also suggests a gradual decline in underlying costs, particularly for mobile termination, indicating potential economic space for future adjustments. Any such considerations should, however, be based on continued monitoring of cost and market developments and subject to a broader assessment of proportionality, sustainability and investment incentives.

Overall, the Delegated Regulation remains appropriate, proportionate and effective in achieving its objectives. It has enabled the transition from fragmented national regulation to a coherent, Union-wide framework that safeguards competition, promotes efficiency, and supports the gradual deregulation of wholesale termination markets. The Commission intends to continue cooperating closely with BEREC and NRAs to ensure that the framework remains aligned with market and technological developments and continues to deliver a stable and predictable regulatory environment across the Union.