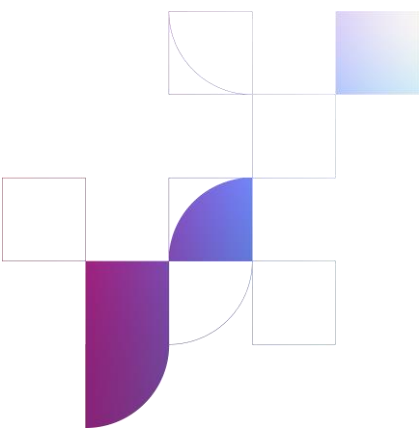


BEREC Report on Western Balkan Roaming

October 2023 – September 2024

13 March 2025



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1 Introduction

The BEREC Report on Western Balkan Roaming presents the results of the 10th round of data collection on international roaming services in the Western Balkans (WB) region including the economies Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia, and Serbia. This Report covers the period from 1 October 2023 – 30 September 2024, i.e. from the 4th quarter 2023 until the 3rd quarter 2024.

The applicable regulatory framework for this data collection is the Agreement on the price reduction of the roaming services in public mobile communication networks in the Western Balkans region, signed on 4 April 2019. According to this agreement, a transitional regime for roaming services shall apply from 1 July 2019 and allow adjustments of the price level of roaming services towards a “home-like” rule. As of 1 July 2021, the Roam Like at Home (RLAH) regime in the region was successfully achieved, meaning that currently, WB consumers do not pay extra charges for calls, SMS and mobile data while in roaming in the region, compared to what they pay at home.

The consumption of data services, weighted by roaming subscribers that have been roaming in the respective period, have significantly increased in the past 3 years, with 70 % growth of data traffic within the WB region just in the last year (Figure 22). This growth is even more pronounced than the domestic data usage growth. Between Q3 2023 and Q3 2024, roaming SMS consumption within the WB region has decreased by 31 % and is now at a level of the average of Q4 2021-Q3 2023 (Figure 18). Voice calls consumption within the WB region is approximately on the same level as after introduction of RLAH in 2021 (Figure 11). While in Bosnia and Montenegro, the average data usage per roaming subscriber decreased between Q3 2023 and Q3 2024, it increased by 185 % in Serbia (Figure 21).

Roaming agreements are keystones of international cooperation in the telecommunications sector and this agreement therefore marks a milestone in the cooperation not only between all six WB signatories, but also with the European Union. Even at the early stage of the transitional regime, the average prices for roaming have been reduced significantly in all six WB signatories, in some cases by over 90 %. In December 2022, an agreement was reached between EU and WB telecommunications providers to reduce roaming prices between EU and WB signatories, providing benefits to consumers in the WB and EU region alike. This agreement came into effect on 1 October 2023.

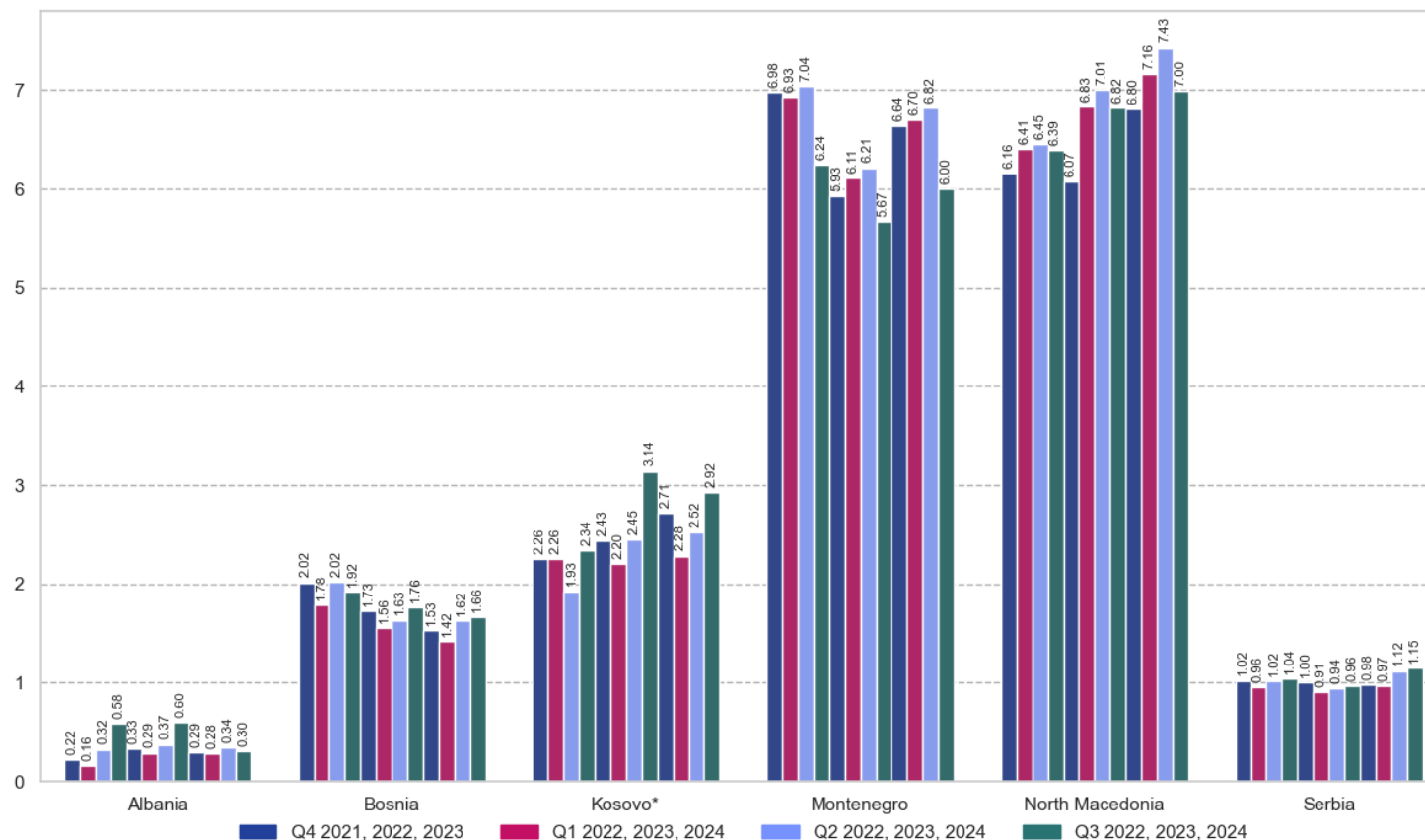
This Report aims to provide information about consumption and price developments and to monitor the implementation of the roaming agreement. The first chapter contains information on subscribers in each of the WB signatories (Chapter 2), followed by an analysis of retail domestic consumption patterns in Chapter 3. Chapter 4 is focused on retail roaming consumption patterns. Chapter 5 offers information on retail roaming revenues, complemented by a chapter on wholesale roaming revenues (Chapter 6). A full list of operators that submitted data may be found in the Annex.



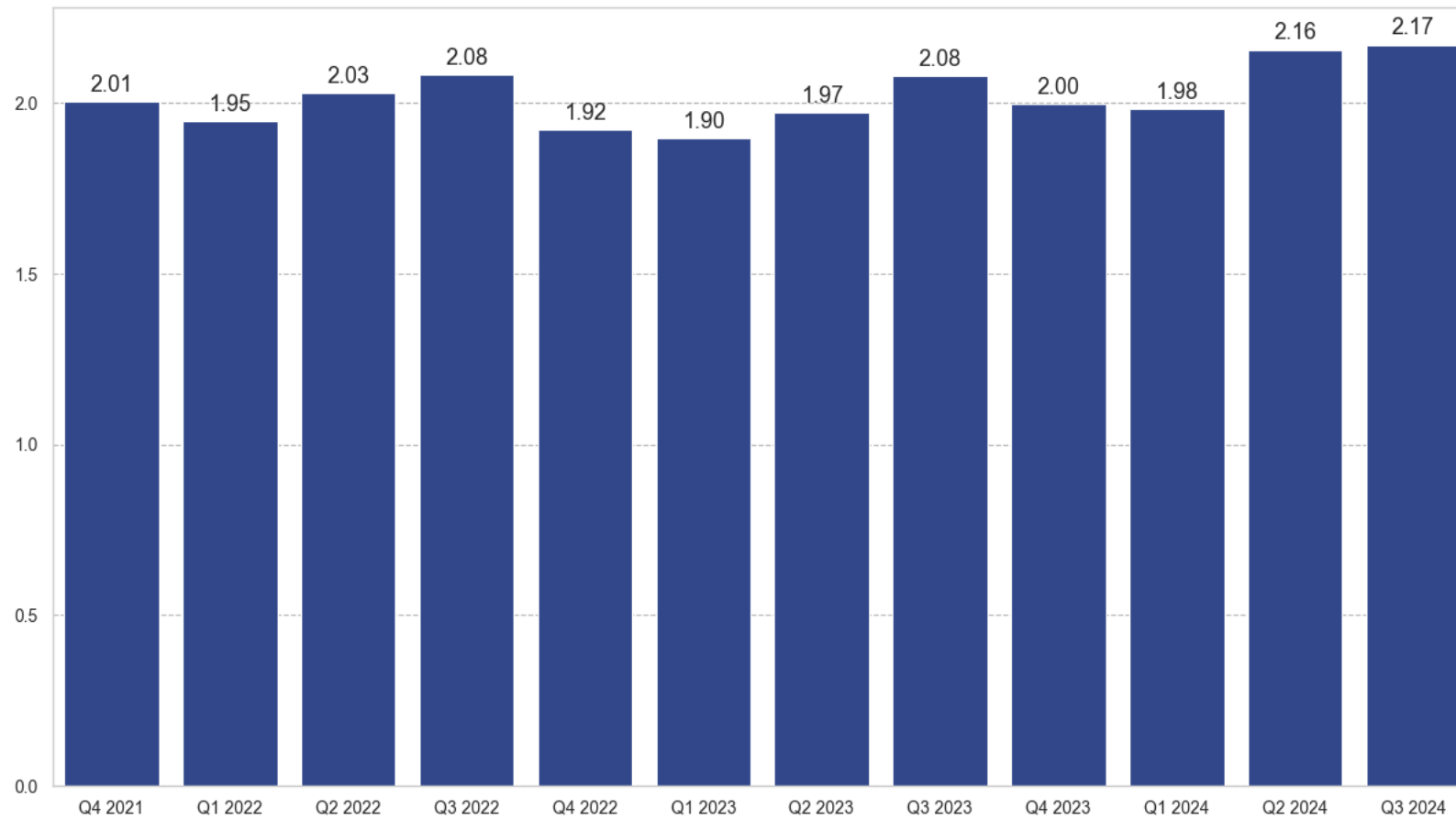
2 Analysis of subscribers and those that use roaming services

2.1 Domestic average retail revenue per user (ARRPU)

Figure 1: Domestic average retail mobile revenue (voice+SMS+Data) per subscriber per month, in Euro¹



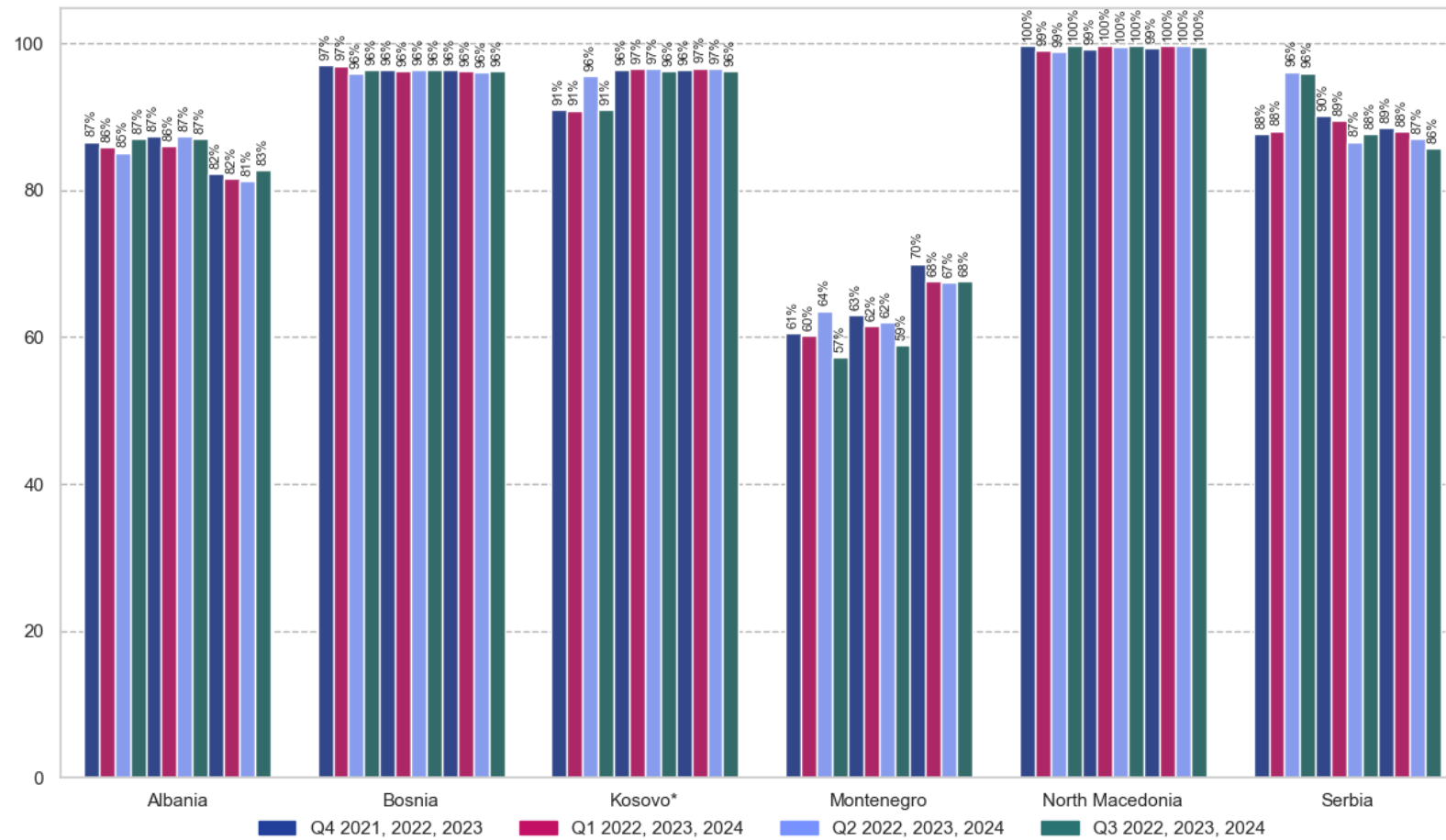
¹ Albanian operators reported bundle data, given high prevalence of domestic bundles and MNOs' difficulties in separating the revenues per item. Please note that ARRPU including bundles and post-payments in Albania amounts to 3.77 (Q4 2021), 3.46 (Q1 2022), 3.77 (Q2 2022), 3.46 (Q3 2022), 4.90 (Q4 2022), 5.20 (Q1 2023), 5.44 (Q2 2023), 6.12 (Q3 2023), 6.84 (Q4 2023), 6.95 (Q1 2024), 7.16 (Q2 2024), and 7.14 (Q3 2024). The values mentioned here in the note are also the ones reported in previous versions of the report. In future versions, we aim to include bundles in addition to metered services for all countries.

Figure 2: Domestic average retail revenue (voice+SMS+data) per subscriber per month for the whole WB region, by quarter²

² Weighted by number of subscribers in each country. If adding data of bundles in Albania, all values increase subsequently: 2.49 (Q4 2021), 2.40 (Q1 2022), 2.50 (Q2 2022), 2.49 (Q3 2022), 2.53 (Q4 2022), 2.56 (Q1 2023), 2.65 (Q2 2023), 2.85 (Q3 2023), 2.81 (Q4 2023), 2.80 (Q1 2024), 3.00 (Q2 2024), and 3.06 (Q3 2024).

2.2 Share of roaming-enabled subscribers

Figure 3: Share of roaming enabled subscribers



3 Consumption patterns for domestic mobile retail services

3.1 Domestic voice minutes: average number of domestic minutes (actual minutes) per subscriber per month

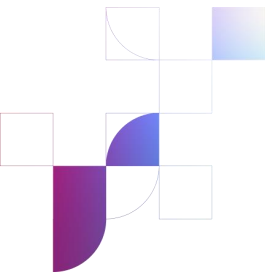


Figure 4: Average number of domestic minutes (actual minutes) per subscriber per month

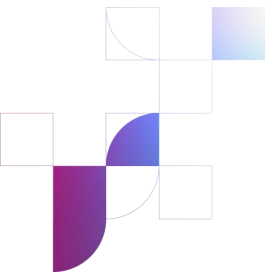
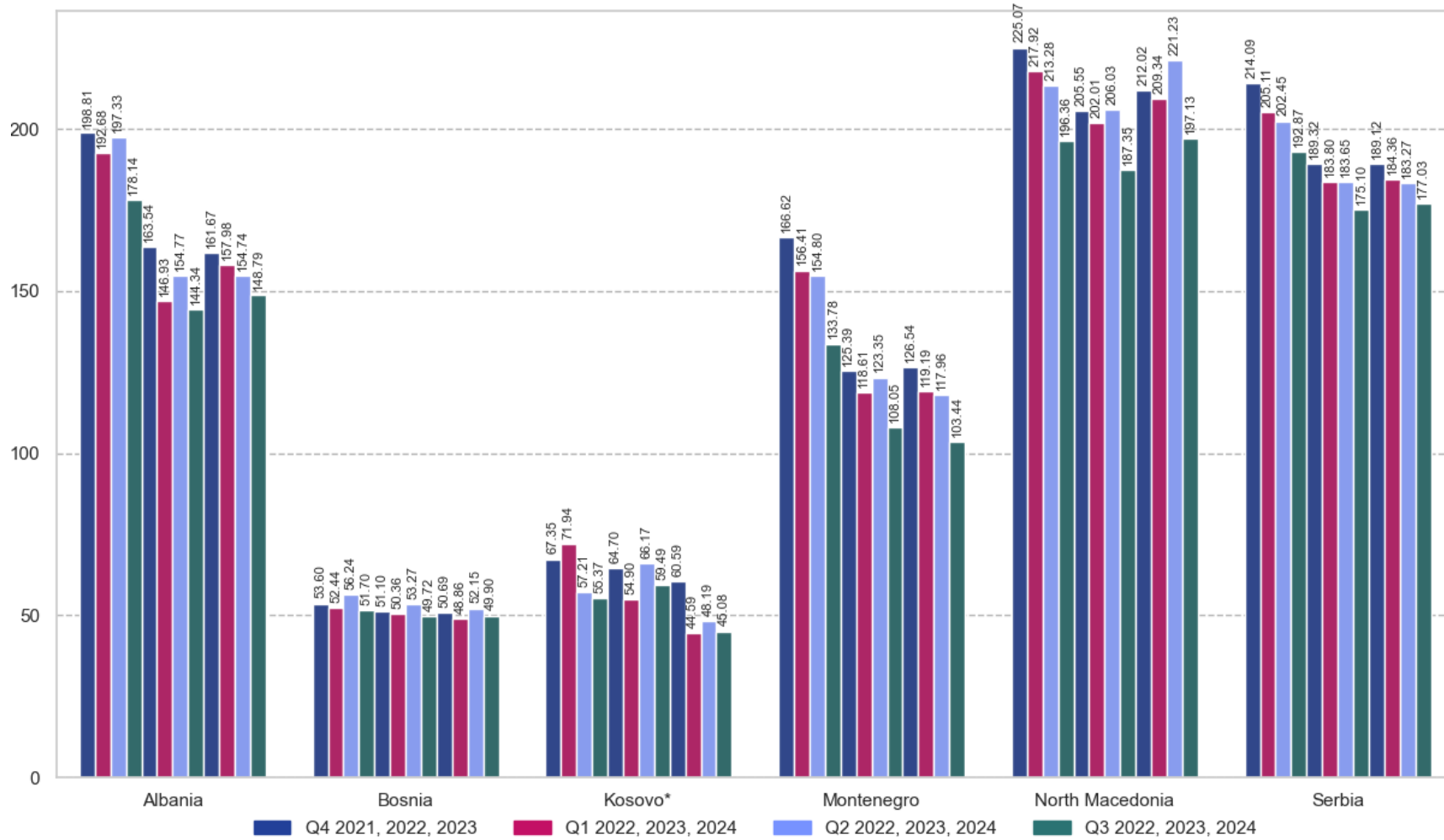
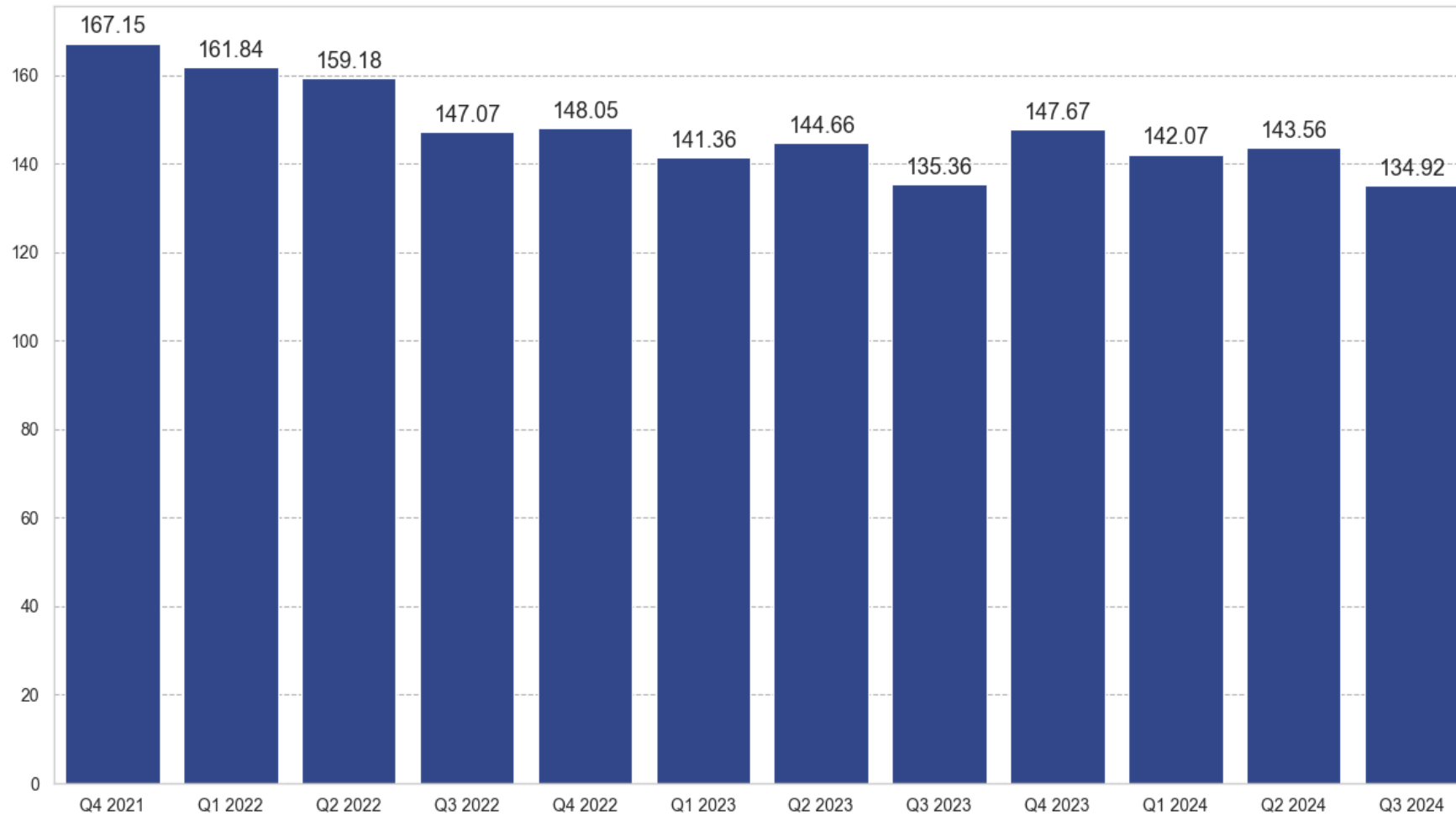


Figure 5: Average number of domestic minutes (actual minutes) per subscriber per month for the whole WB region, by quarter



3.2 Domestic SMS: average number of domestic SMS per subscriber per month

Figure 6: Average number of domestic SMS per subscriber per month

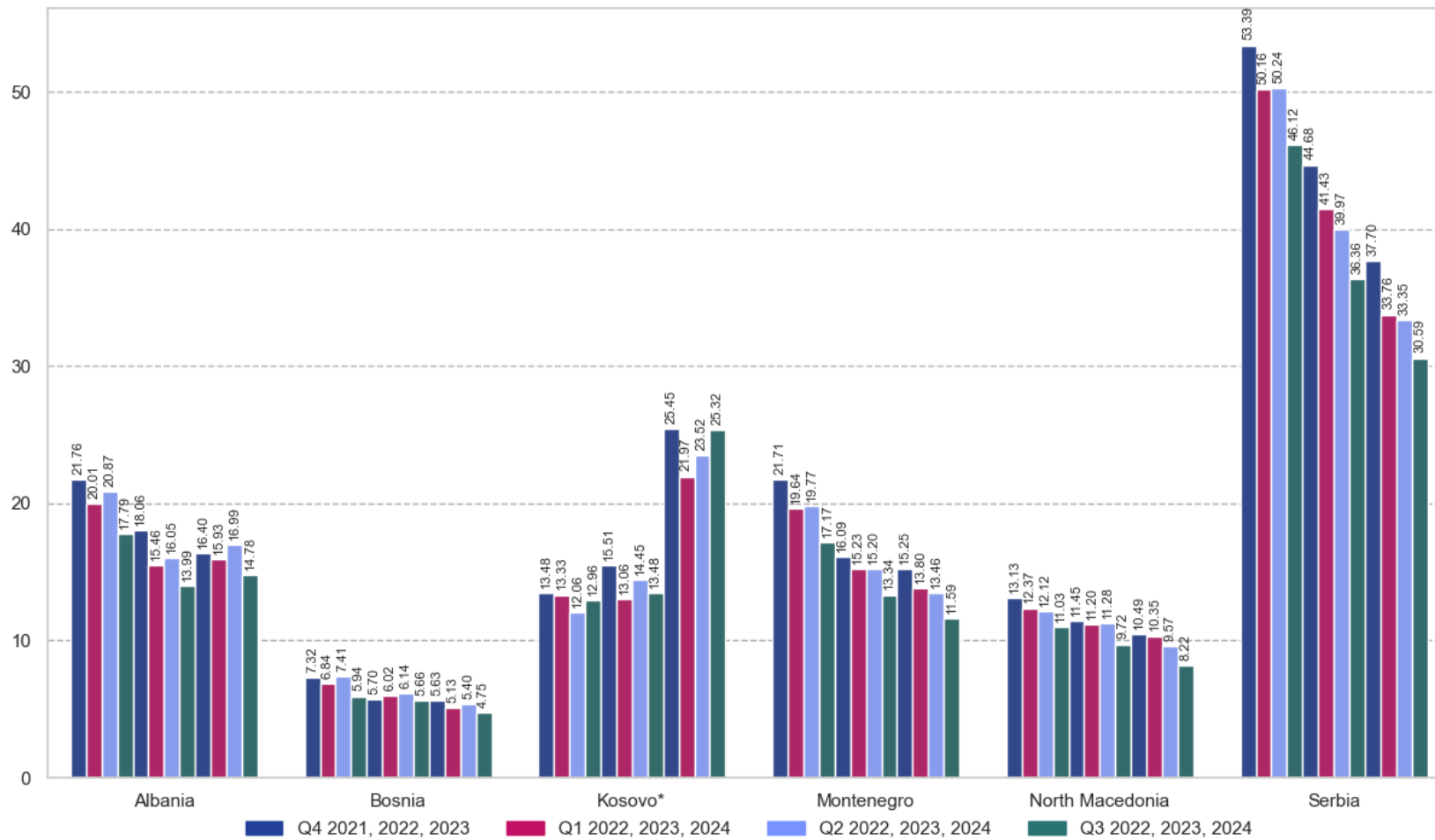
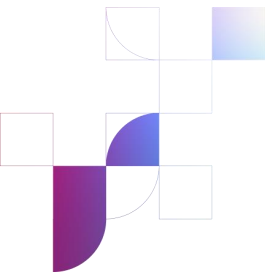
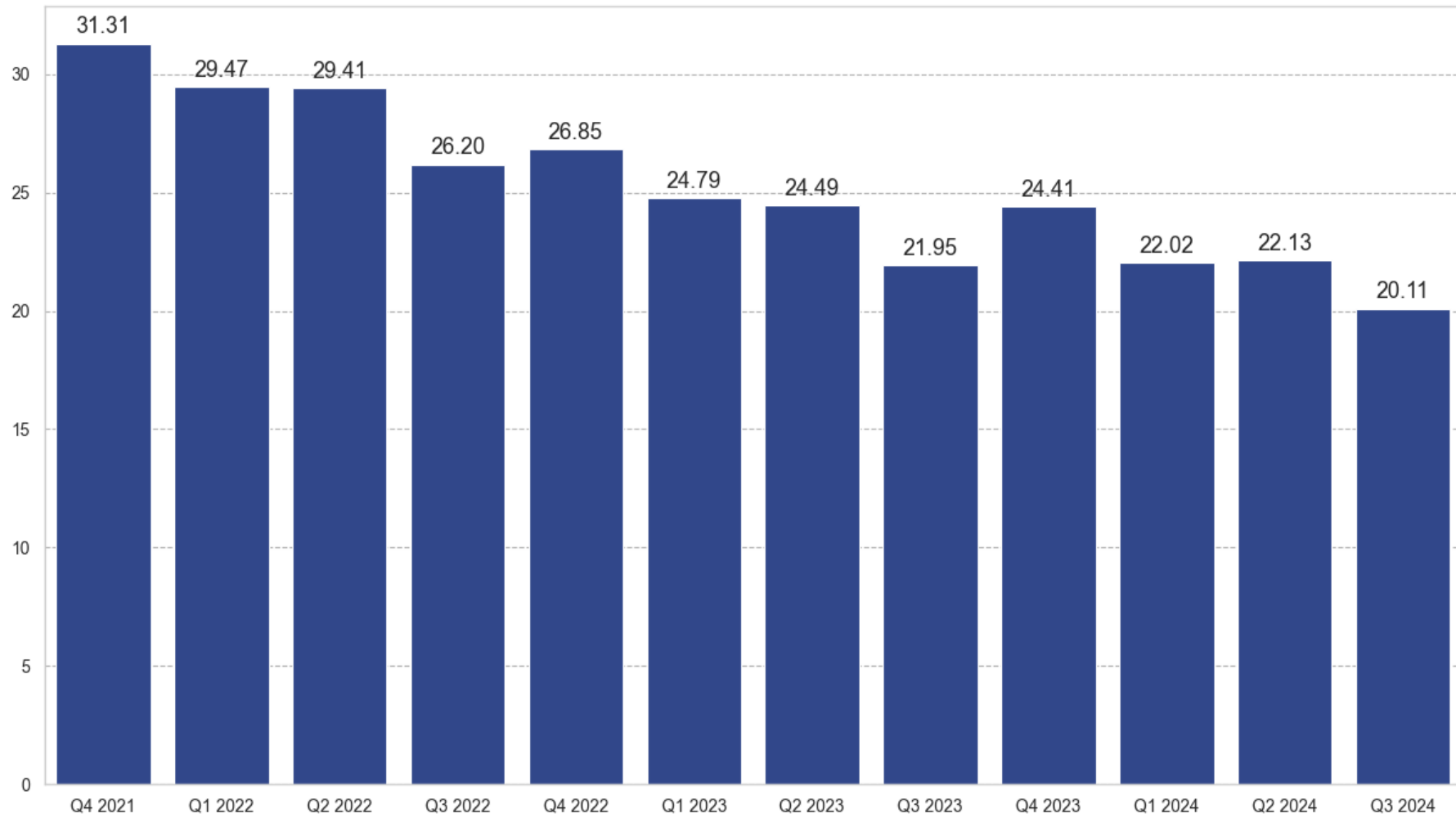


Figure 7: Average number of domestic SMS per subscriber per month for the whole WB region, by quarter



3.3 Domestic data: average consumption of domestic data (GB) per subscriber per month

Figure 8: Average consumption of domestic data (GB) per subscriber per month

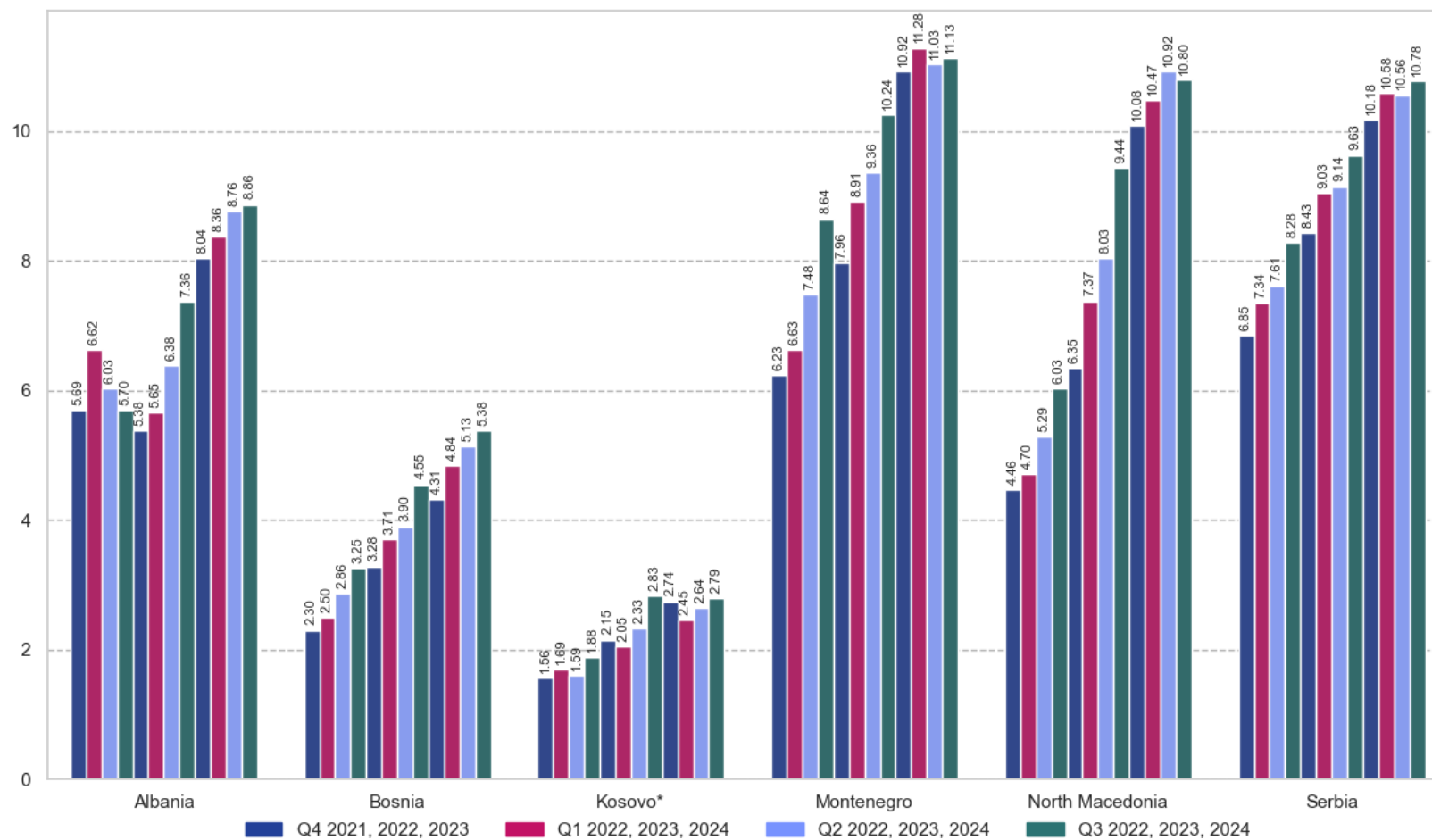
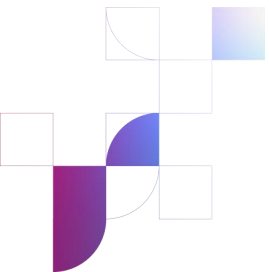
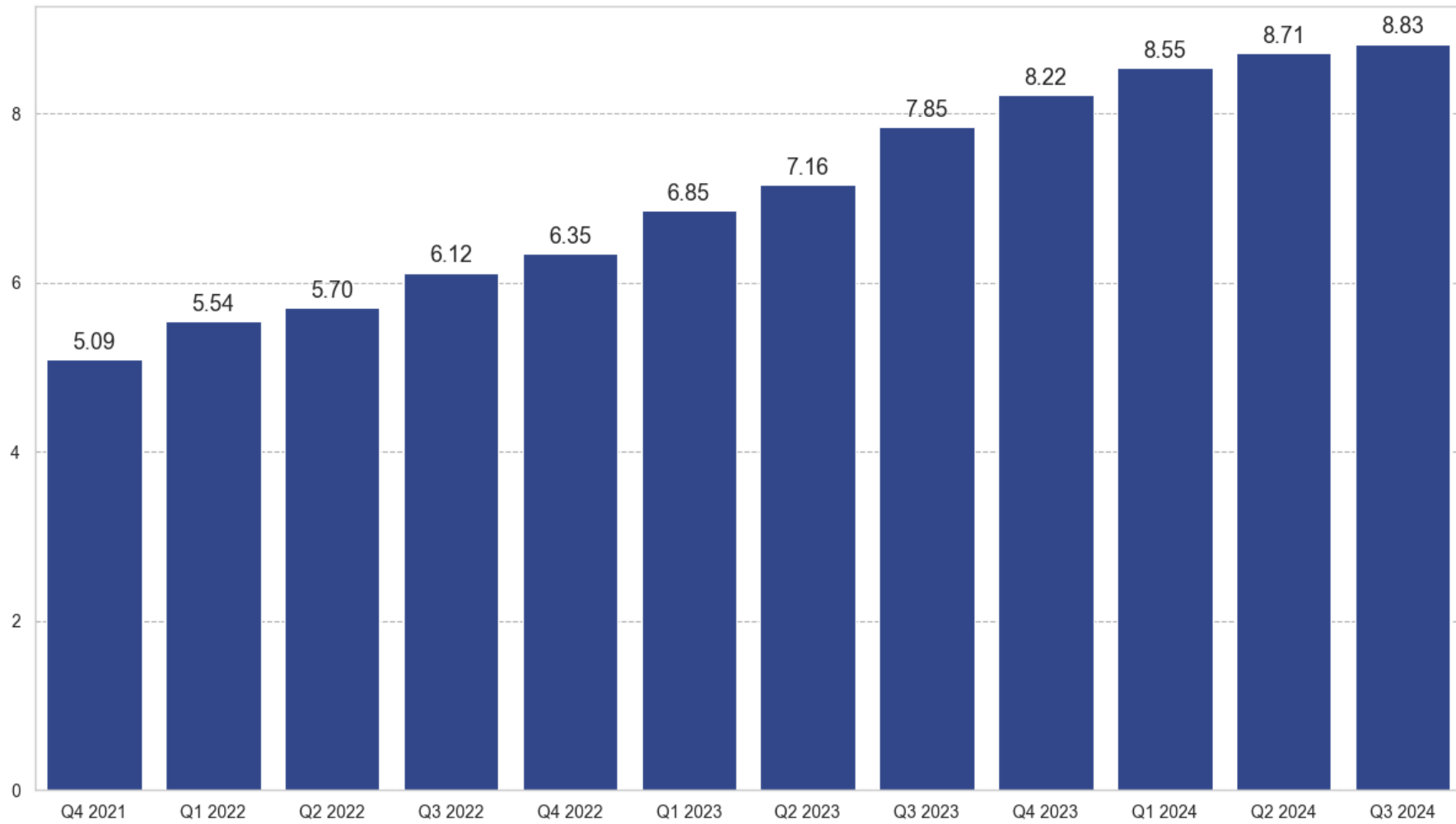


Figure 9: Average consumption of domestic data (GB) per subscriber per month for the whole WB region, by quarter



4 Consumption patterns for roaming services (voice, SMS and data)

4.1 Roaming voice services, calls made: average number of regional roaming minutes per roaming-enabled subscriber per month

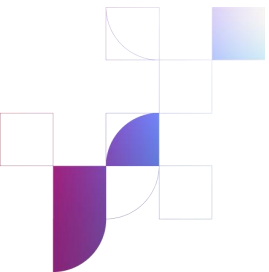
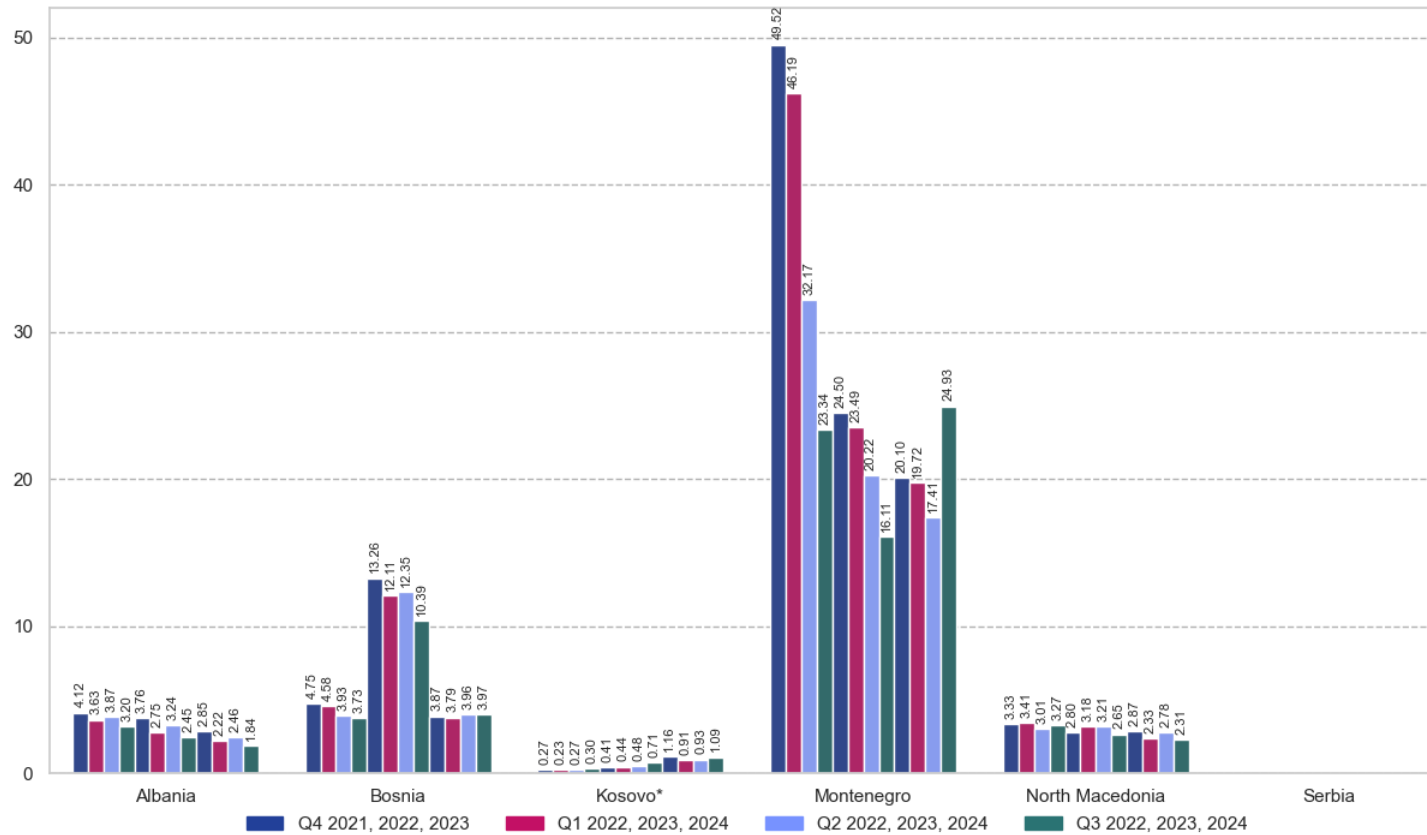


Figure 10: Average number of roaming minutes within the WB region (from alternative, RLAH+ and RLAH tariffs) per subscriber roaming at least once in the concerned quarter and region per month³



³ Roam Like at Home (RLAH) was successfully achieved and roaming free WB region was established as of 1 July 2021. RLAH+ is not being reported in the majority of countries as of this date.

Note: Only one of four operators provided complete data for Serbia for alternative tariffs. For confidentiality reasons, we omit them from the figure.

Figure 11: Average number of roaming minutes within the WB region (from alternative, RLAH+ and RLAH tariffs) per subscriber per month for the whole WB region, by quarter

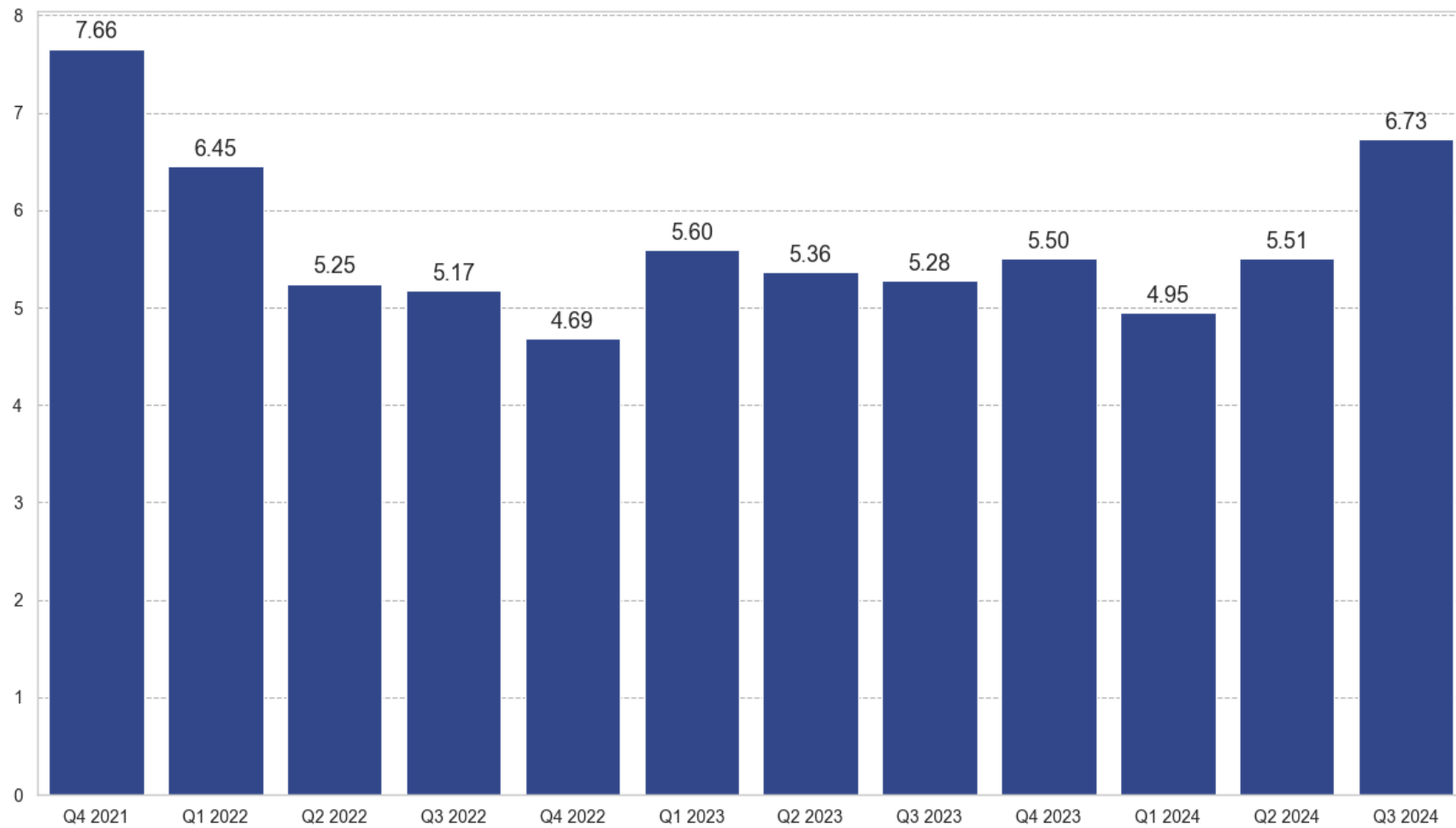


Figure 12: Average number of roaming minutes within the WB region from RLAH+ and RLAH tariffs per RLAH+ and RLAH subscriber roaming at least once in the concerned quarter and region per month

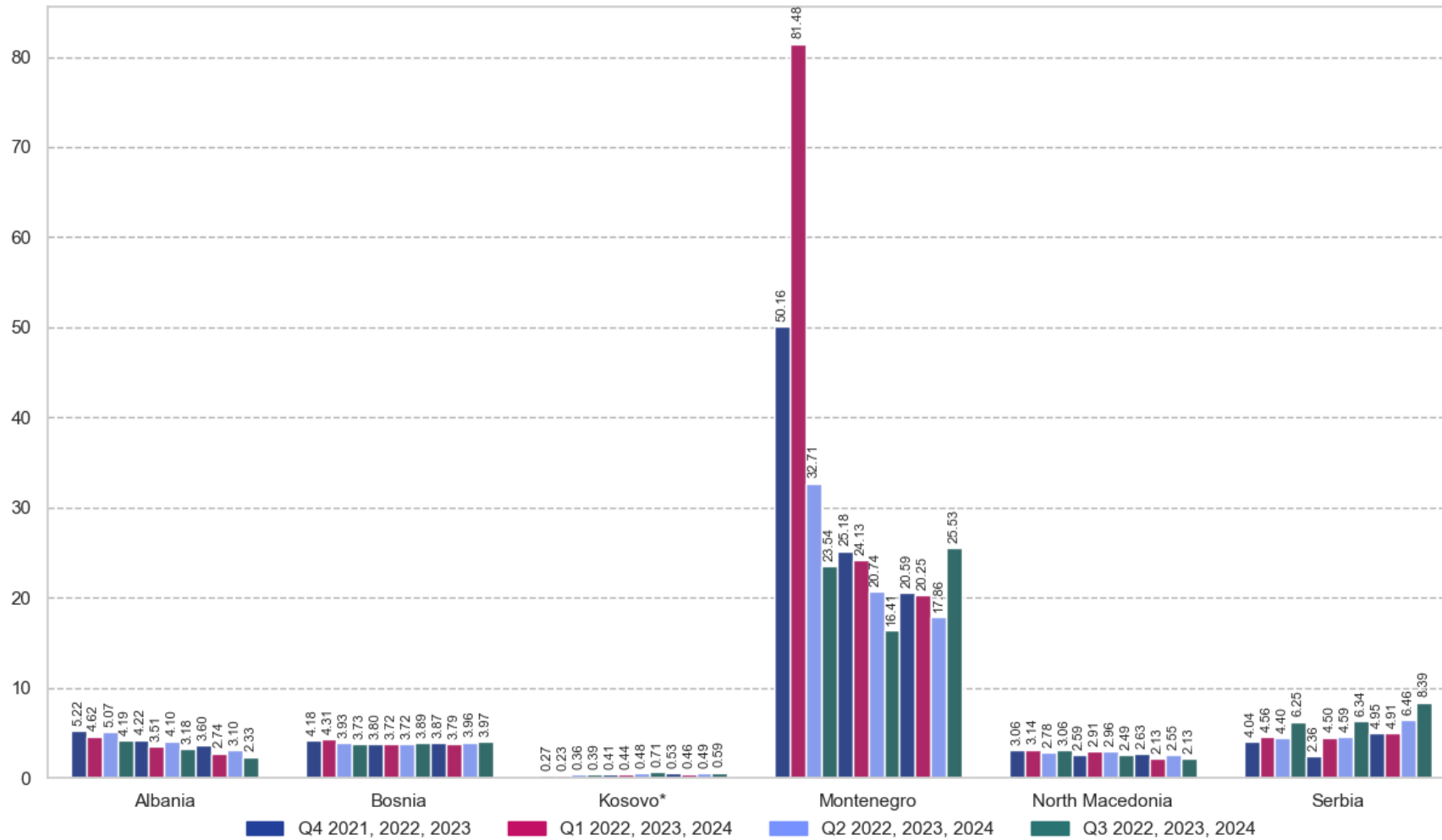
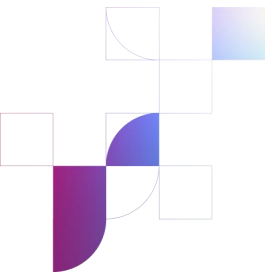
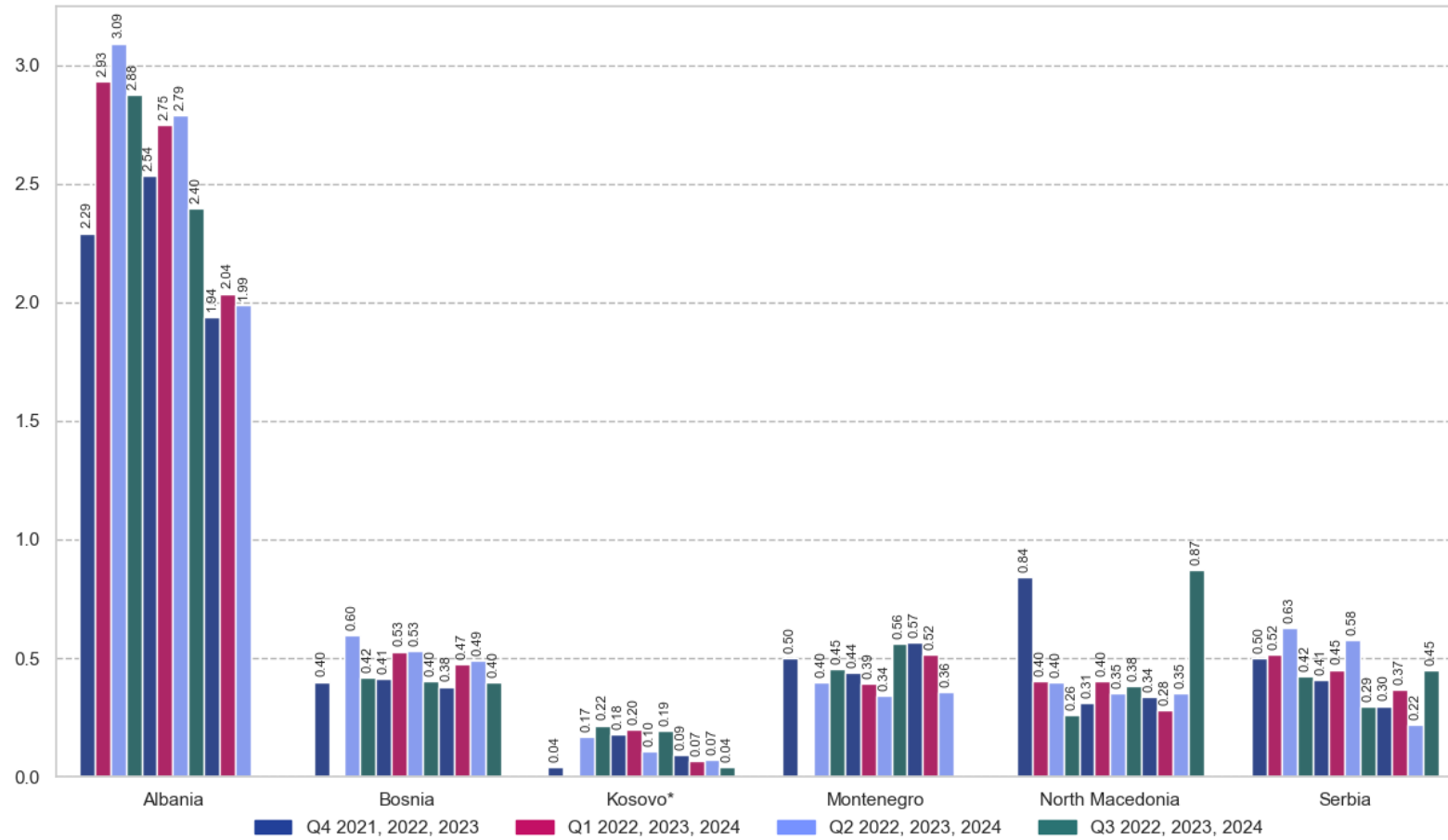


Figure 13: Average number of roaming minutes within the EEA region per subscriber roaming at least once in the concerned quarter and region per month



4.2 Roaming voice services, calls received: average number of roaming minutes per regional roaming enabled subscriber per month

Figure 14: Average number of roaming minutes within the WB region (from alternative, RLAH+ and RLAH tariffs) per subscriber roaming at least once in the concerned quarter and region per month

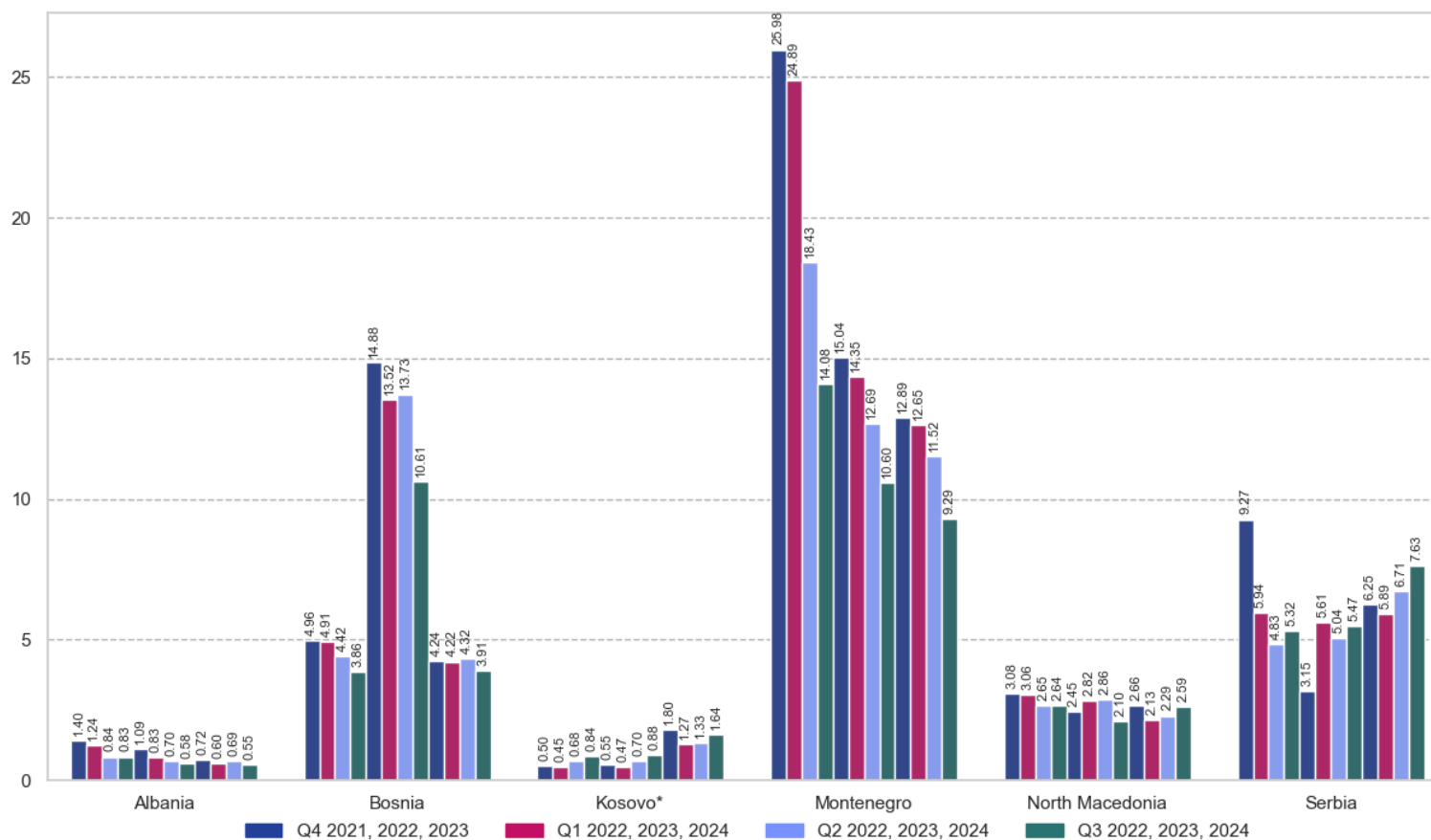
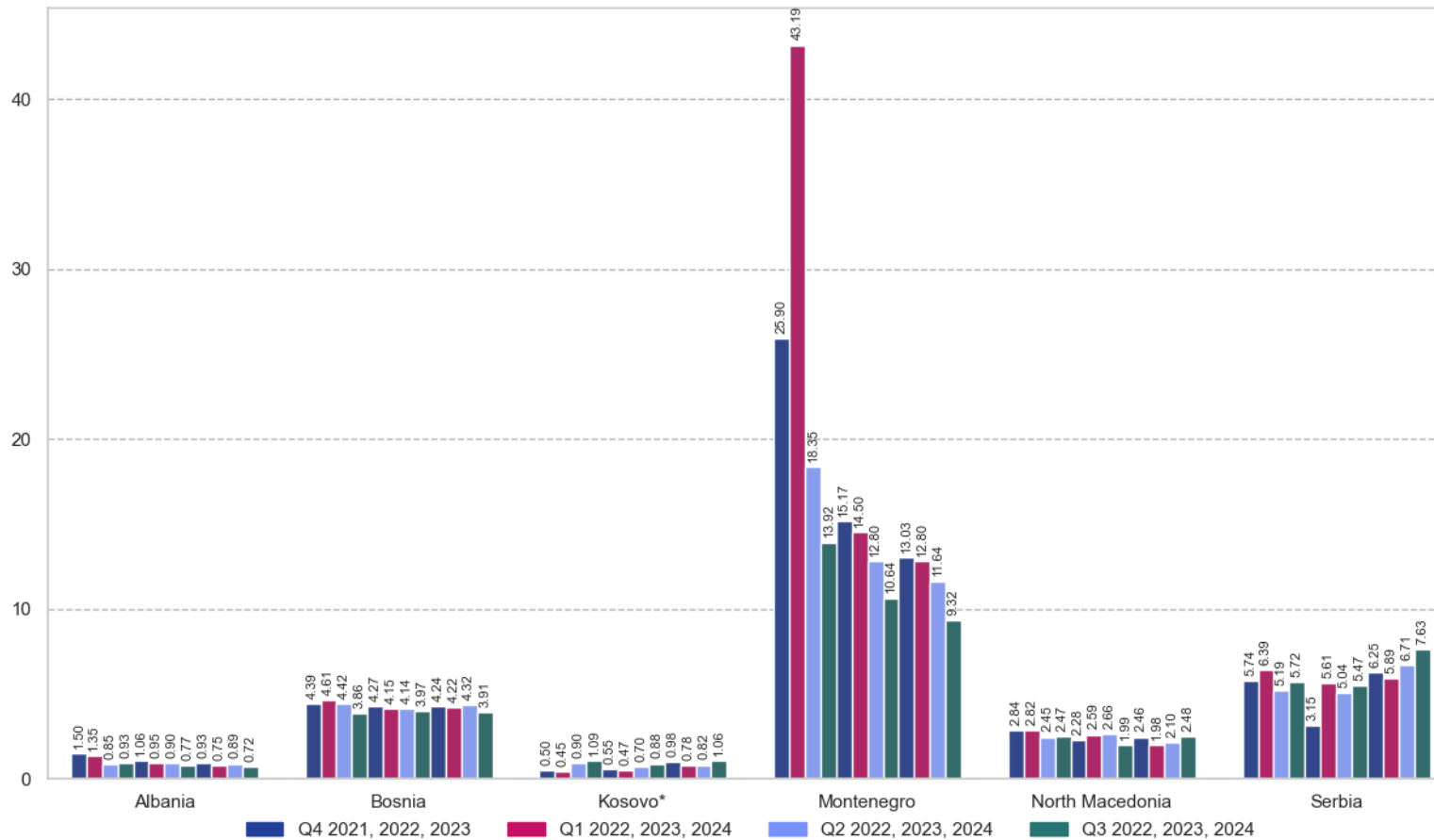
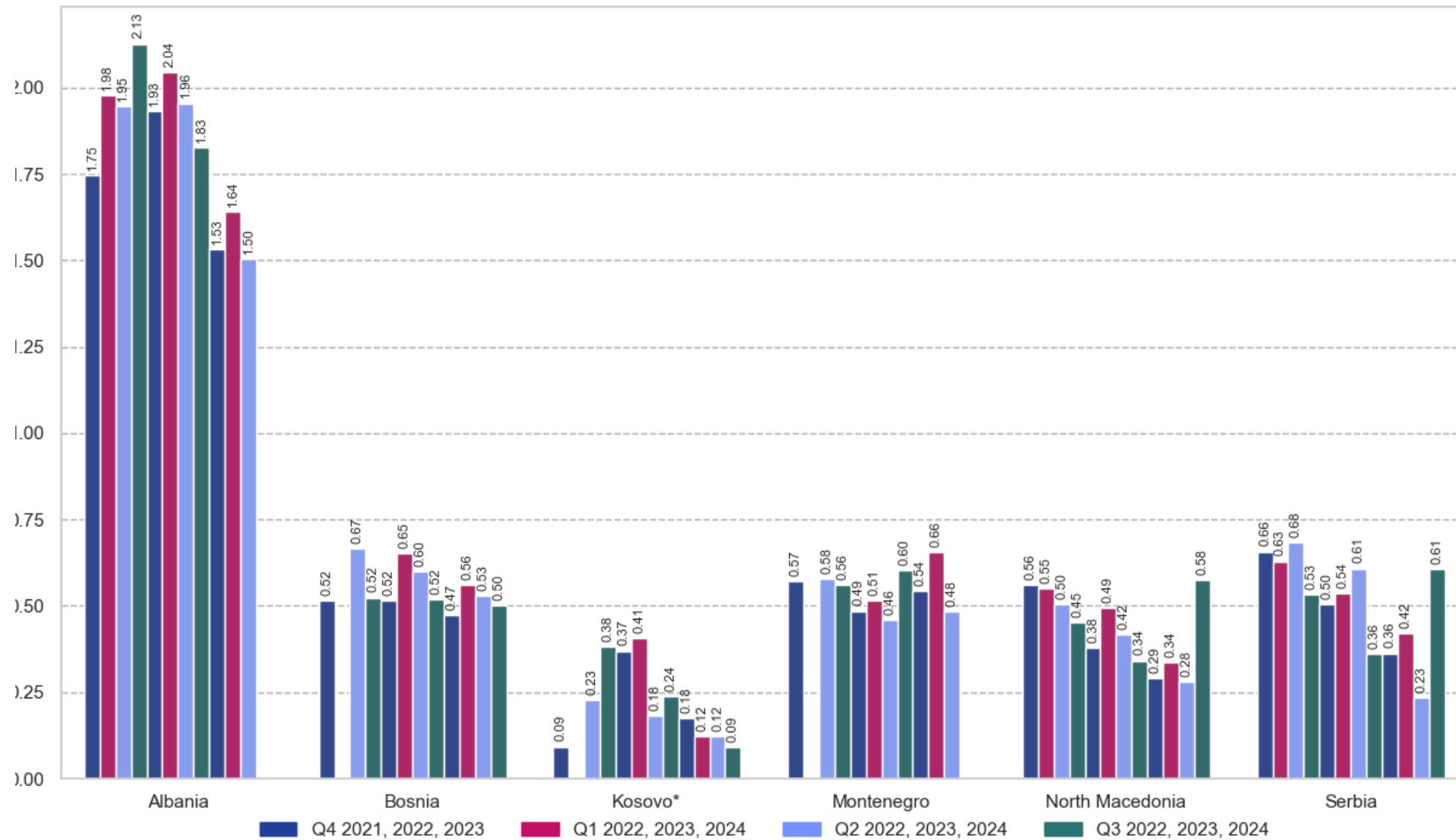


Figure 15: Average number of roaming minutes within the WB region from RLAH+ and RLAH tariffs per RLAH+ and RLAH subscriber roaming at least once in the concerned quarter and region per month⁴



⁴ Roam Like at Home (RLAH) regime in the WB region was successfully achieved as of 1 July 2021. RLAH+ is not being reported as of this date.

Figure 16: Average number of roaming minutes within the EEA region per number of subscribers roaming at least once in the concerned quarter and region per month



4.3 Roaming SMS services: average number of roaming SMS per regional roaming enabled subscriber per month

Figure 17: Average number of roaming SMS (from alternative, RLAH+ and RLAH tariffs) within the WB region per subscriber roaming at least once in the concerned quarter and region per month

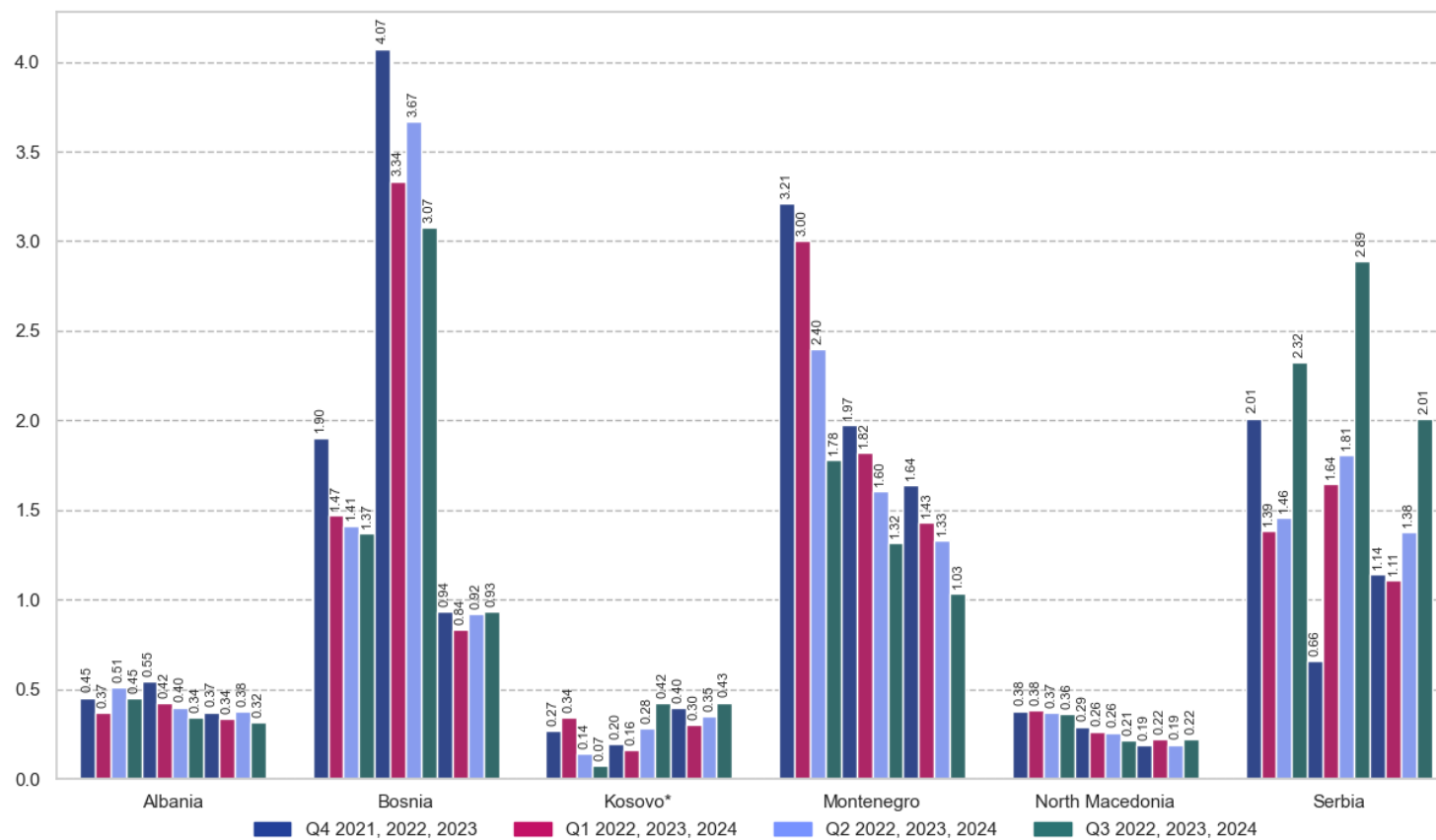


Figure 18: Average number of roaming SMS (from alternative, RLAH+ and RLAH tariffs) within the WB region per subscriber roaming at least once in the concerned quarter and region per month for the whole WB region, by quarter

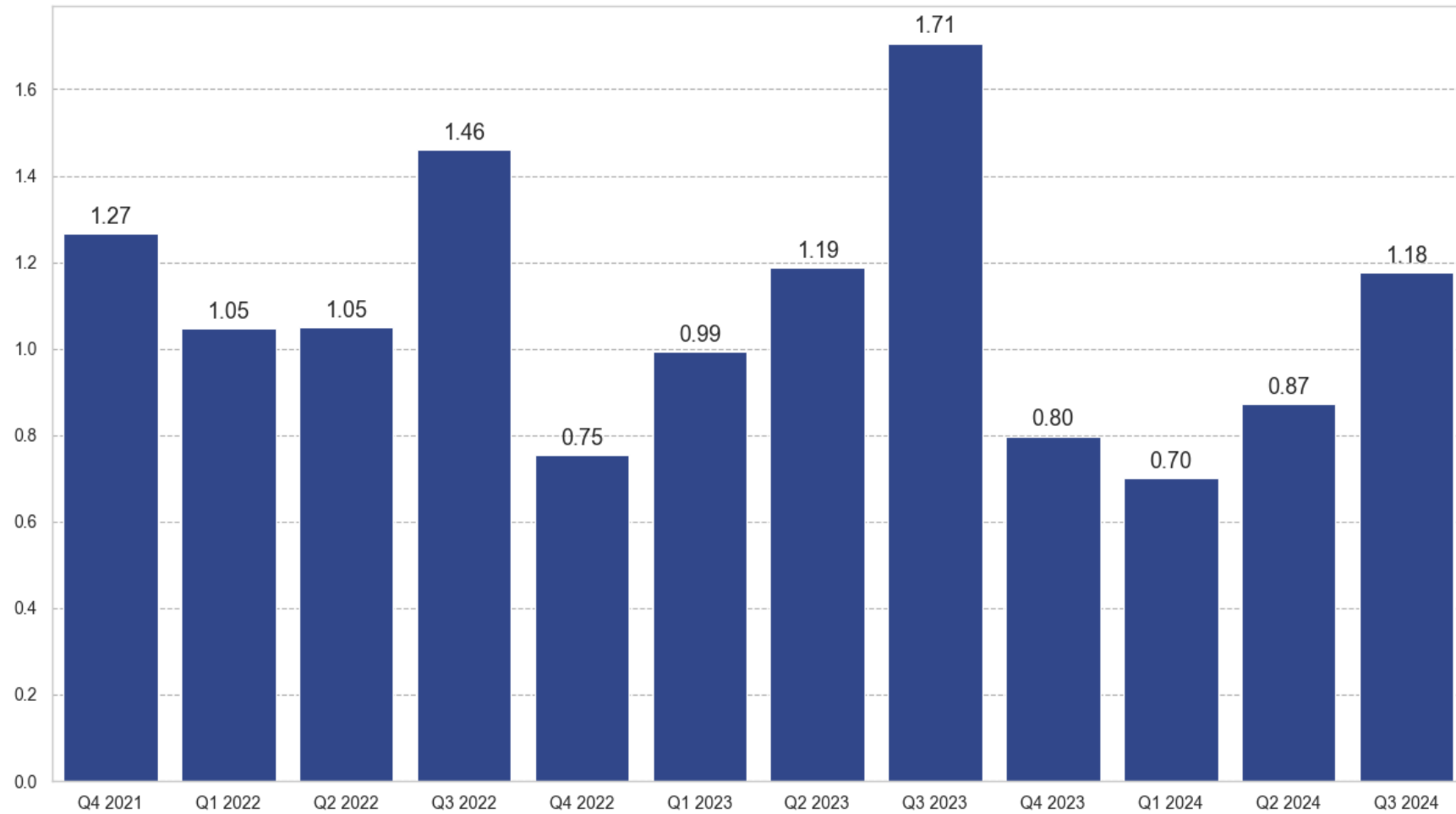


Figure 19: Average number of roaming SMS within the WB region (from RLAH+ and RLAH tariffs) per subscriber roaming at least once in the concerned quarter and region per month

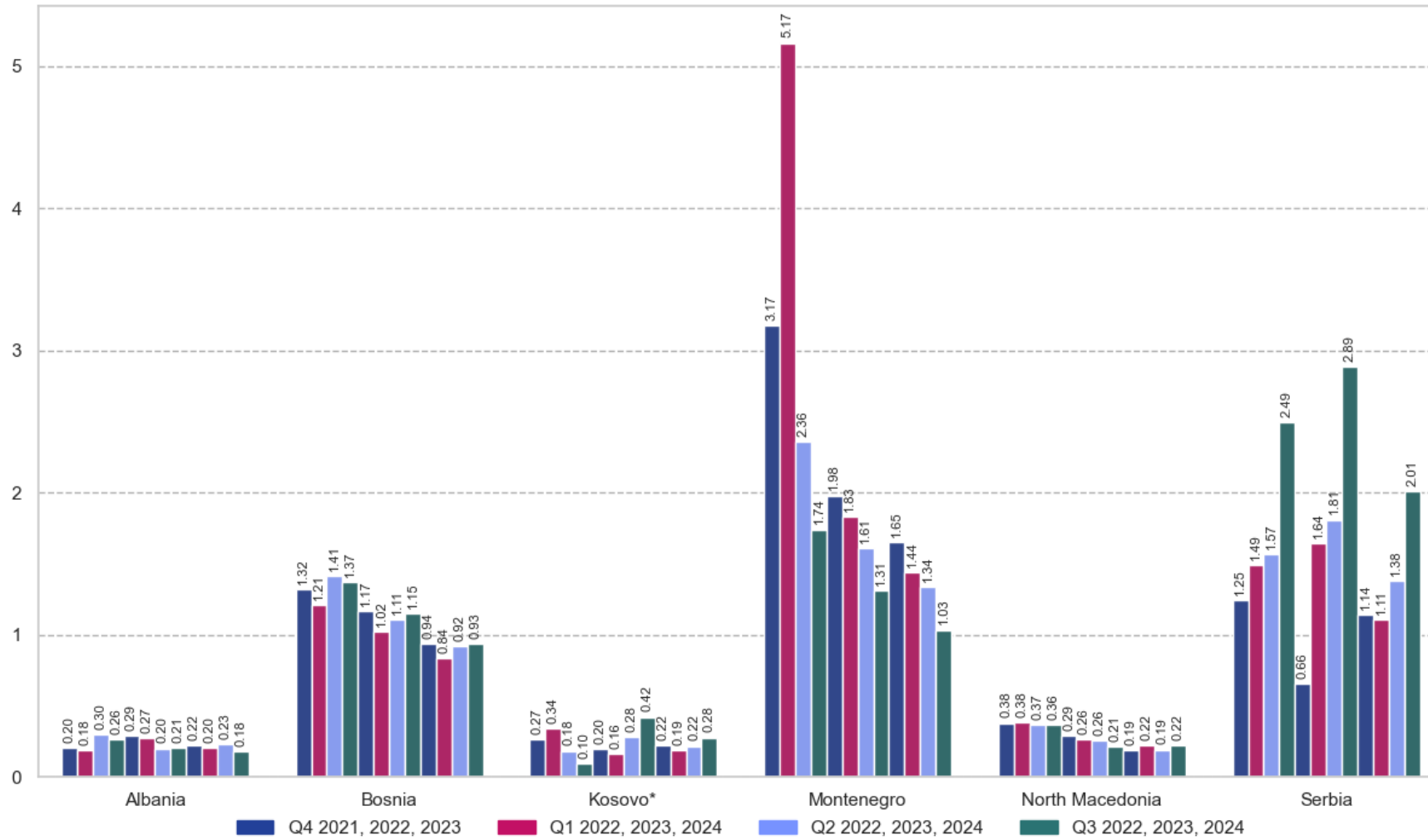
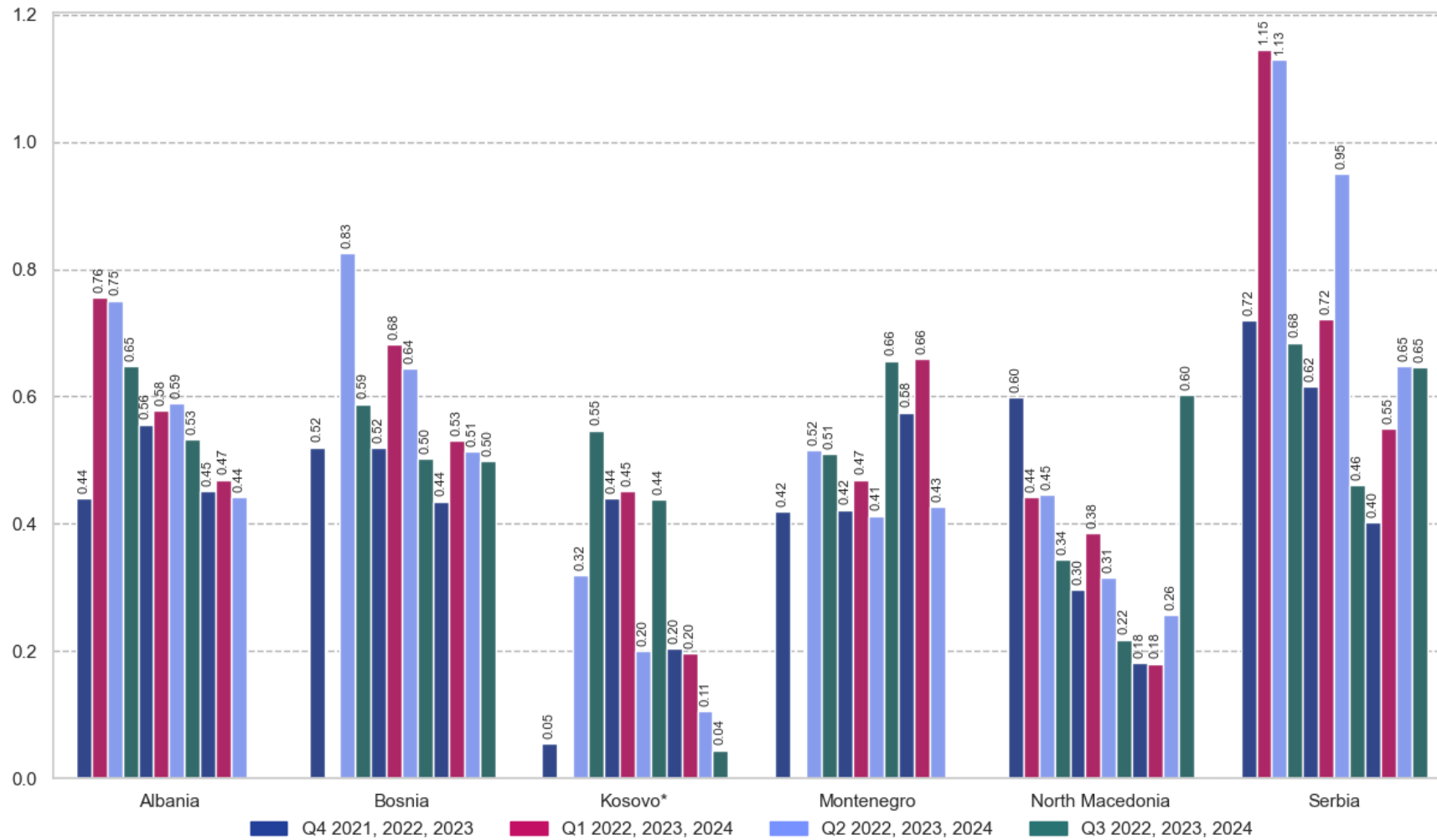


Figure 20: Average number of roaming SMS within the EEA region per subscriber roaming at least once in the concerned quarter and region per month



4.4 Roaming data services: average data roaming consumption in GB per regional roaming-enabled subscriber per month

Figure 21: Average data roaming consumption in GB (from alternative, RLAH+ & RLAH tariffs) within the WB region per subscriber roaming at least once in the concerned quarter and region per month

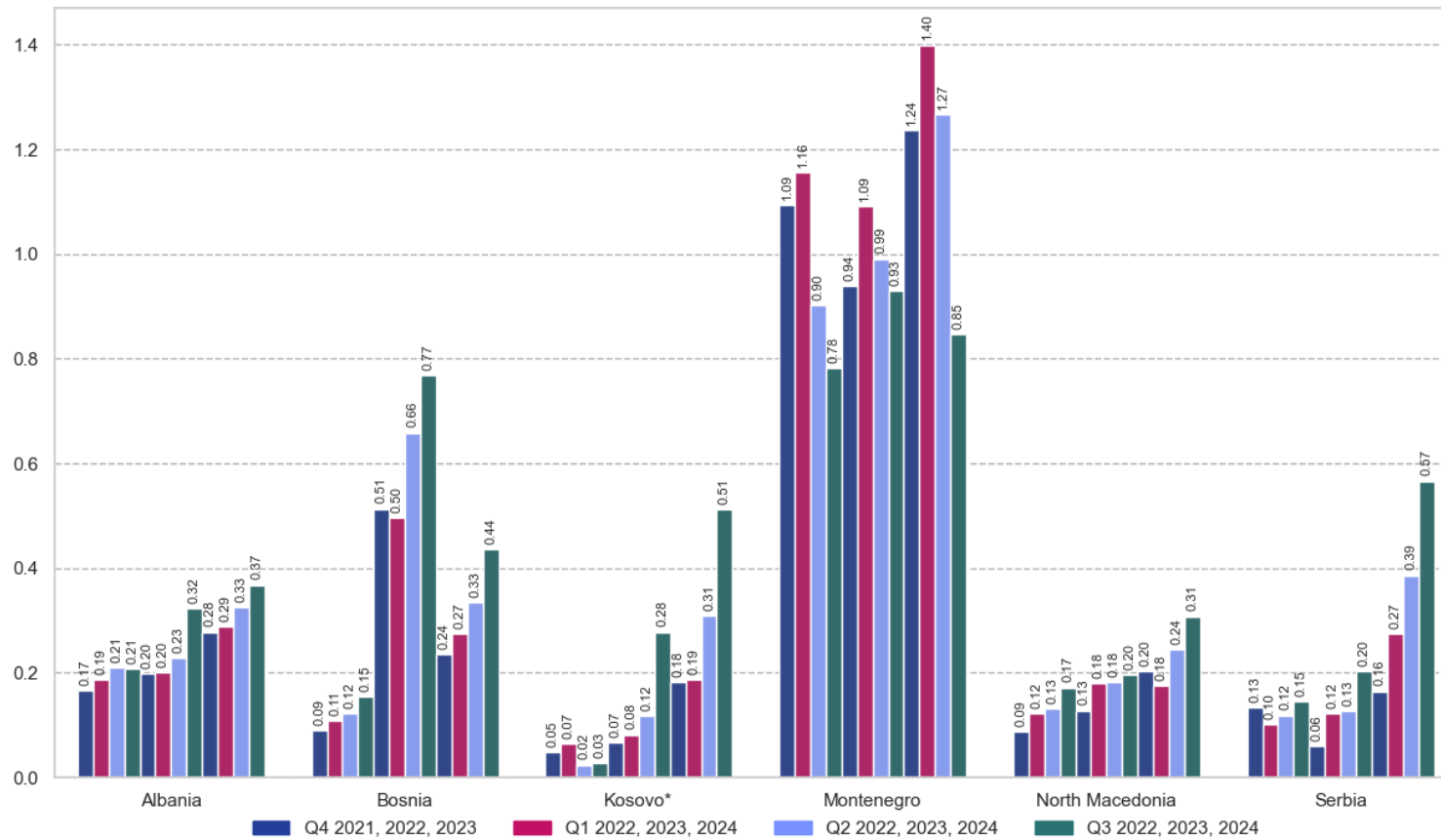


Figure 22: Average data roaming consumption in GB (from alternative, RLAH+ & RLAH tariffs) within the WB region per subscriber roaming at least once in the concerned quarter and region per month for the whole WB region, by quarter

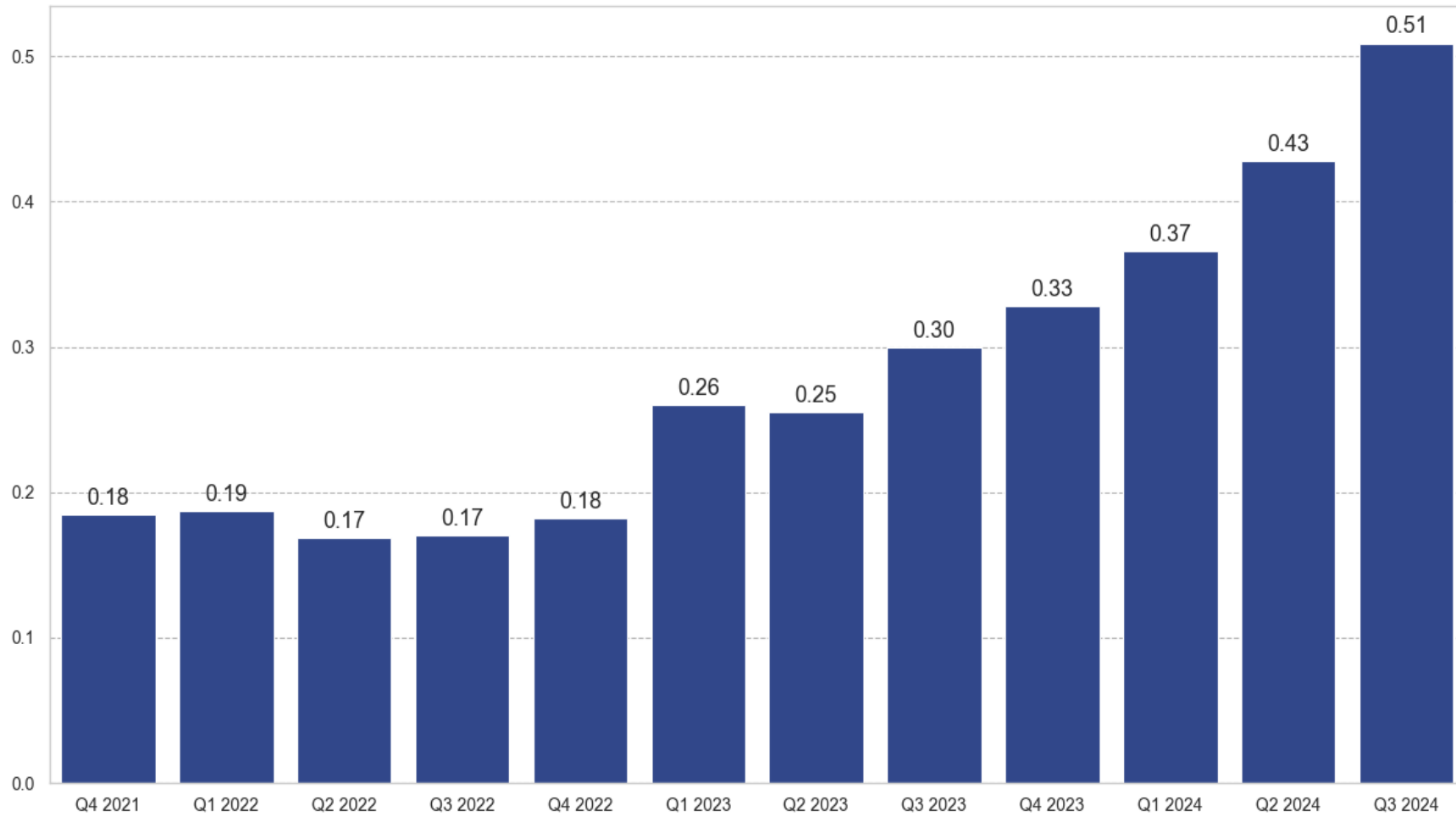


Figure 23: Average data roaming consumption in GB within the WB region from RLAH+ and RLAH tariffs per RLAH+ and RLAH subscriber roaming at least once in the concerned quarter and region per month

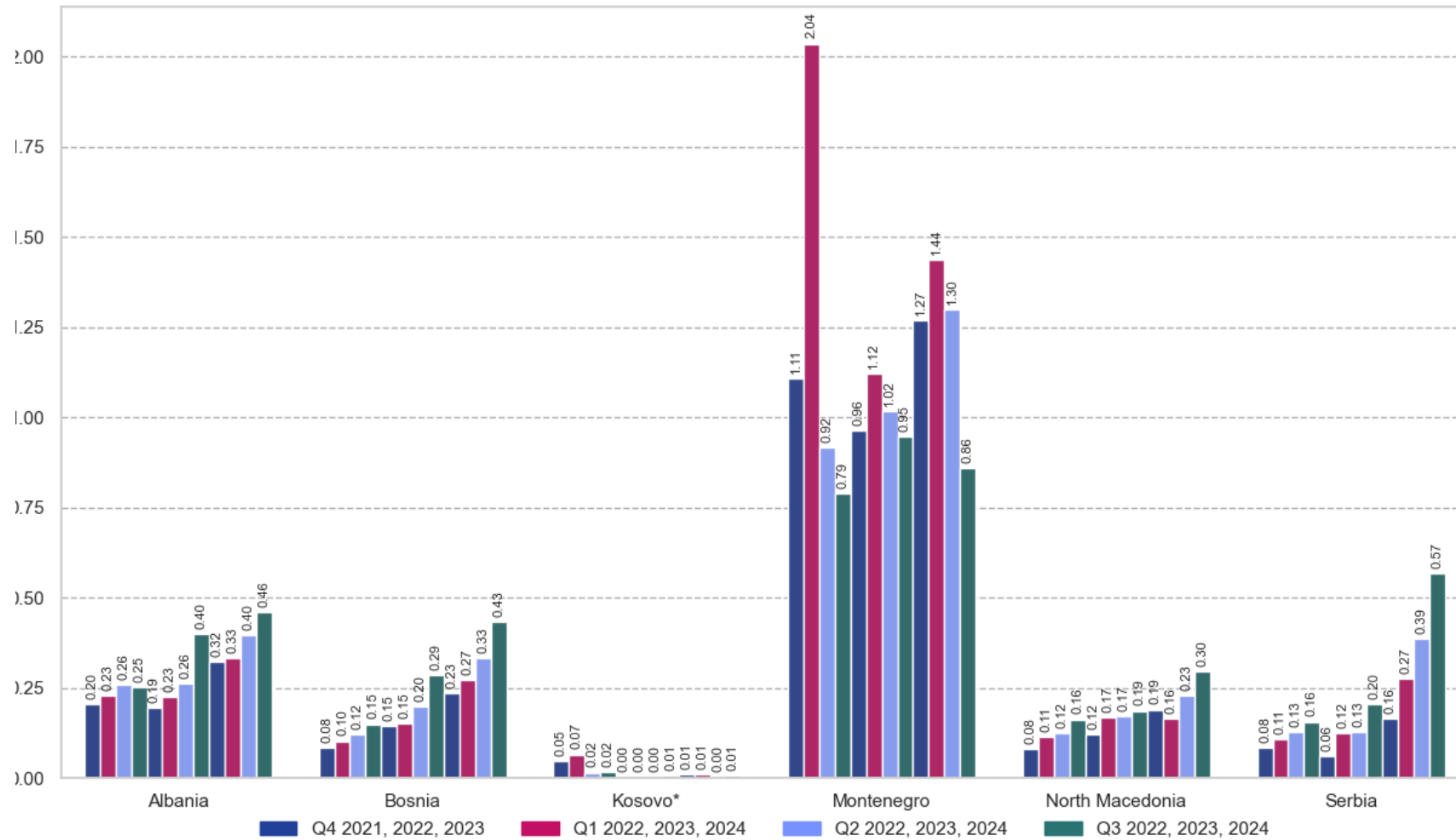
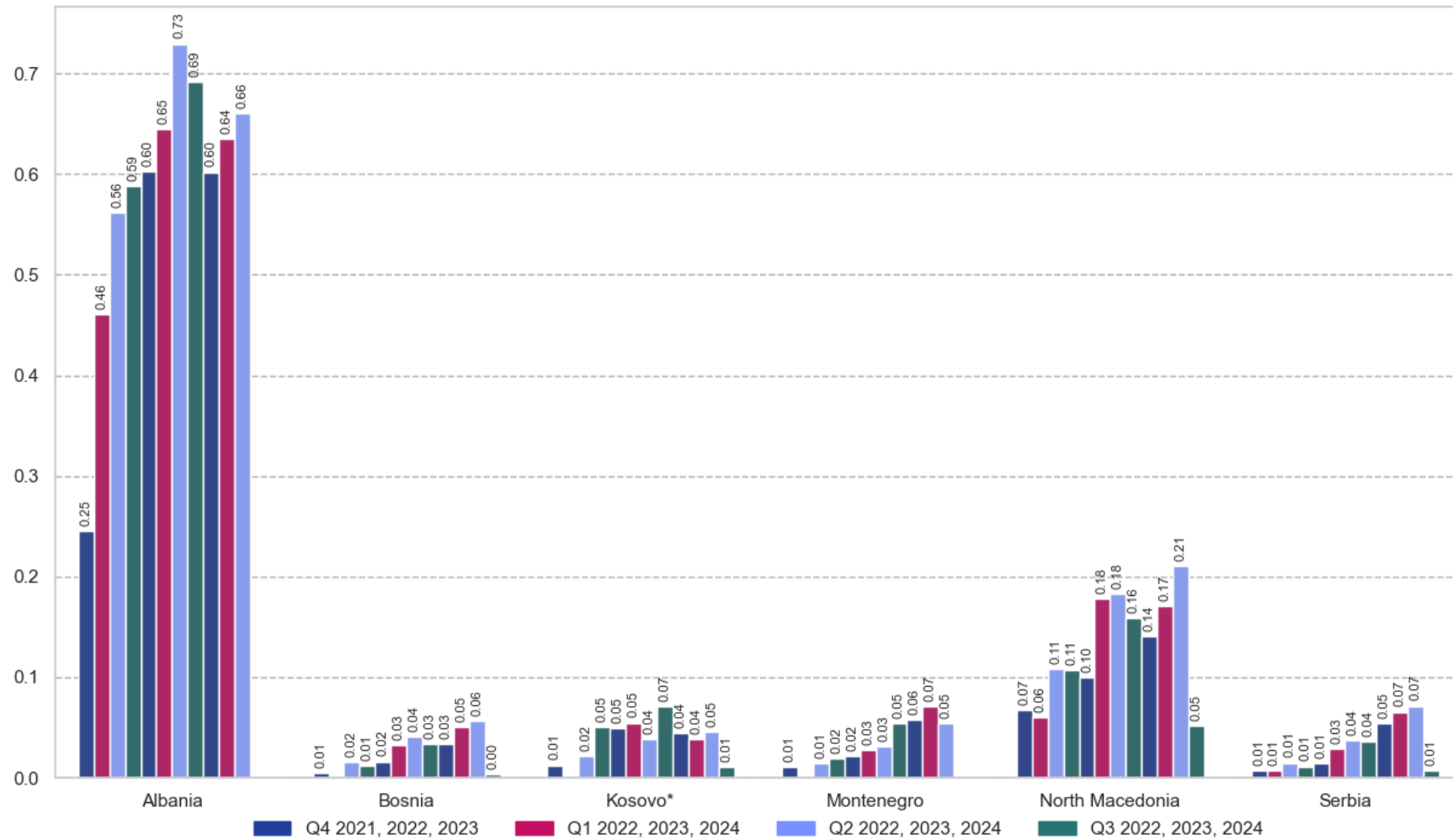


Figure 24: Average data roaming consumption in GB within the EEA region subscriber roaming at least once in the concerned quarter and region per month



5 The development of retail roaming services: retail revenues per unit

5.1 Average retail roaming revenues per minute, calls made

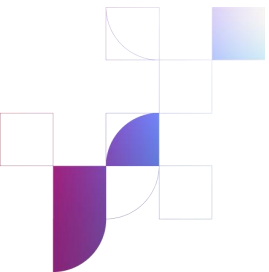
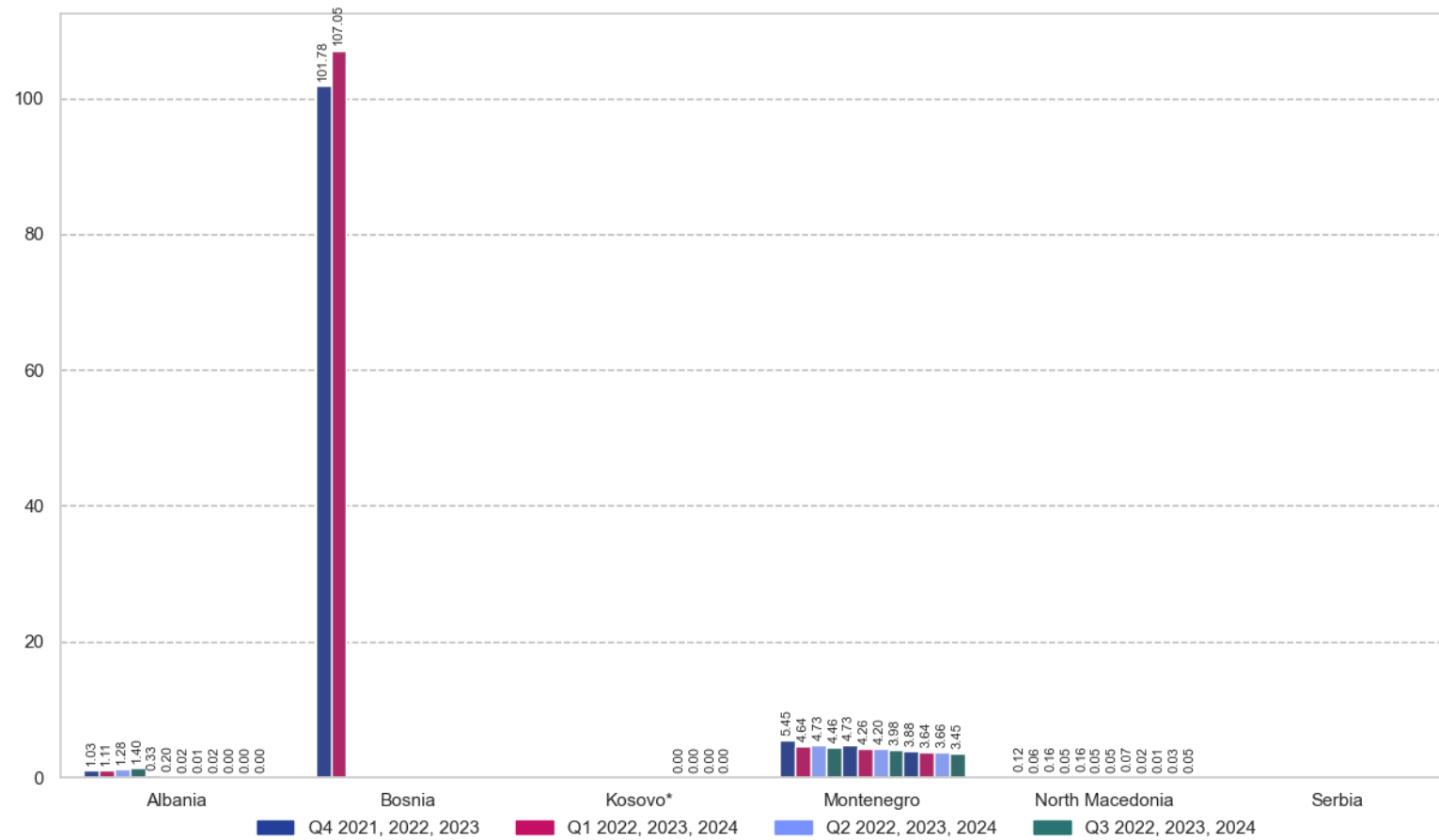
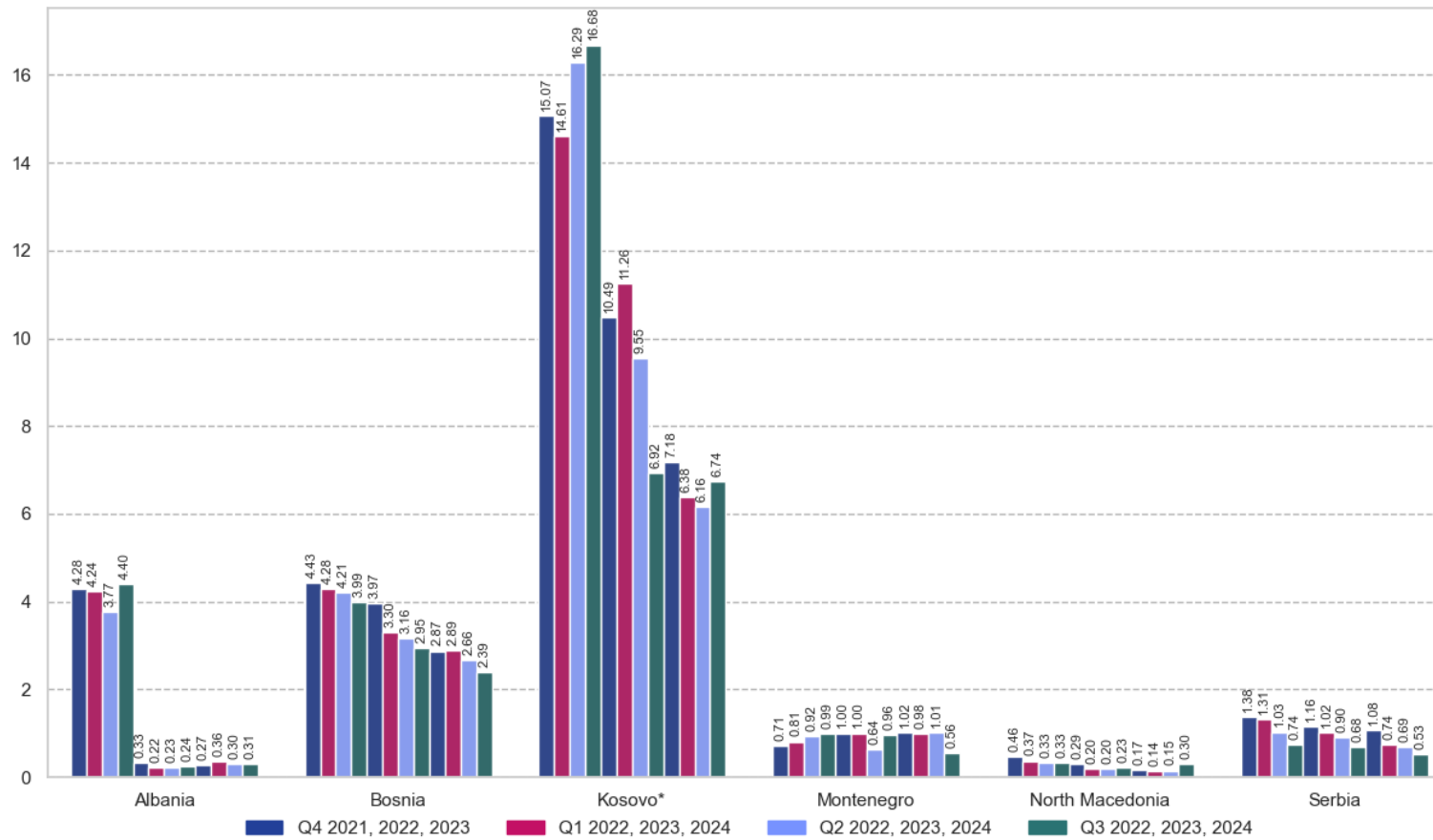


Figure 25: Average retail roaming revenues per alternative WB roaming minute, calls made (actual minutes), in Eurocent (within WB)⁵



⁵ Albania: "In the data submitted for the period Q4-2022 to Q3 2023 we haven't used drivers to calculate the average revenues for each unit i.e. minutes, data and SMS." Serbia: Only one out of four providers sent the relevant data.

Figure 26: Average retail roaming revenues per WB RLAH+ and RLAH⁶ roaming minute, calls made (actual minutes), in Eurocent (within WB)⁷



⁶ The Roam Like at Home (RLAH) regime in the WB region was introduced on 1 July 2021. Only Albania still observes RLAH+ tariffs in the current reporting period.
⁷ Albania: "In the data submitted for the period Q4-2022 to Q3 2023 we haven't used drivers to calculate the average revenues for each unit i.e. minutes, data and SMS."

Figure 27: Average retail roaming revenues per minute, calls made (actual minutes), in Euro (within EEA countries)

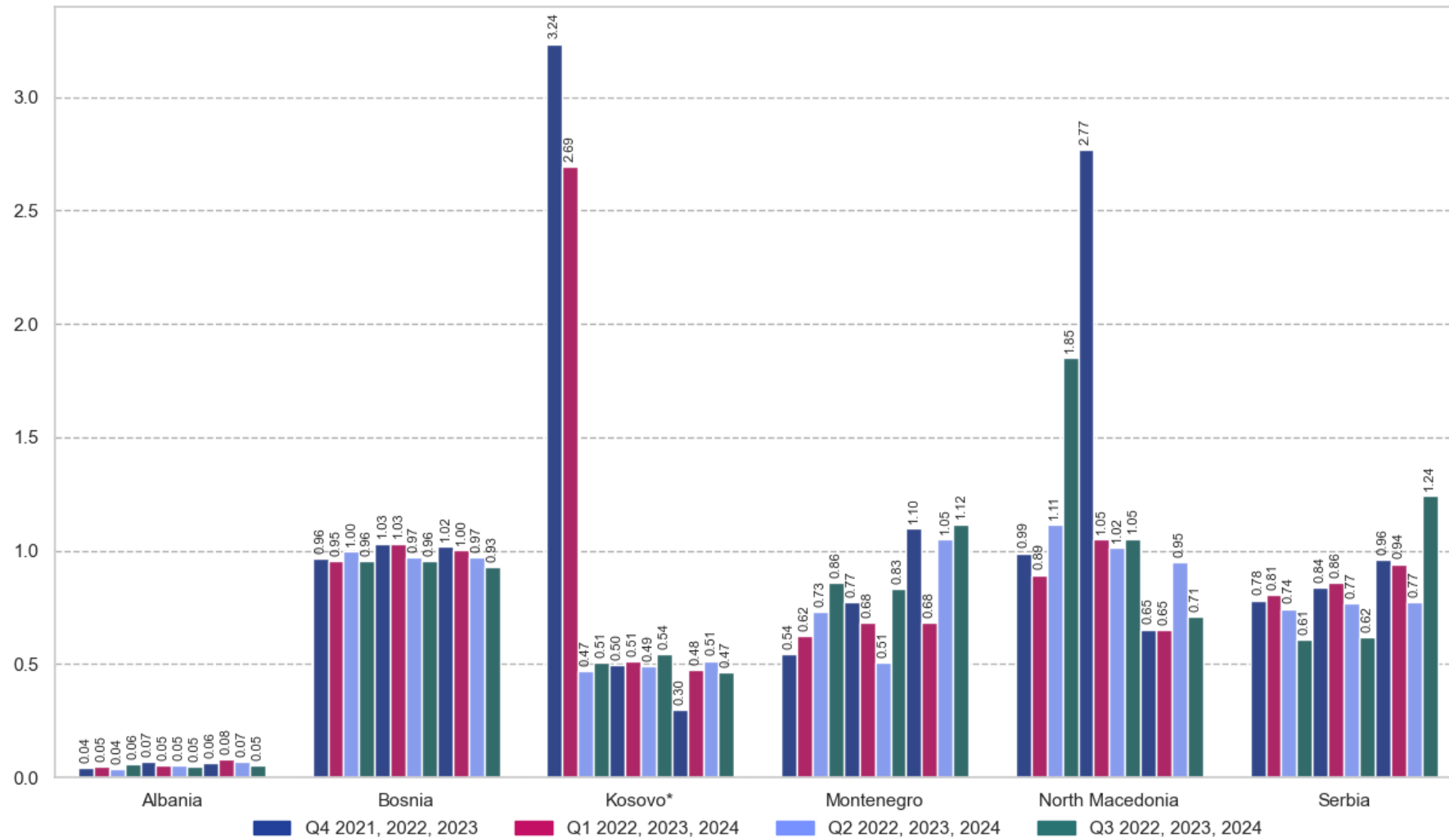
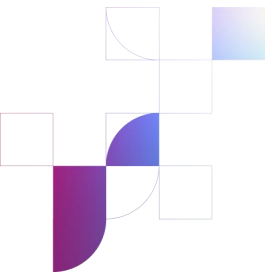
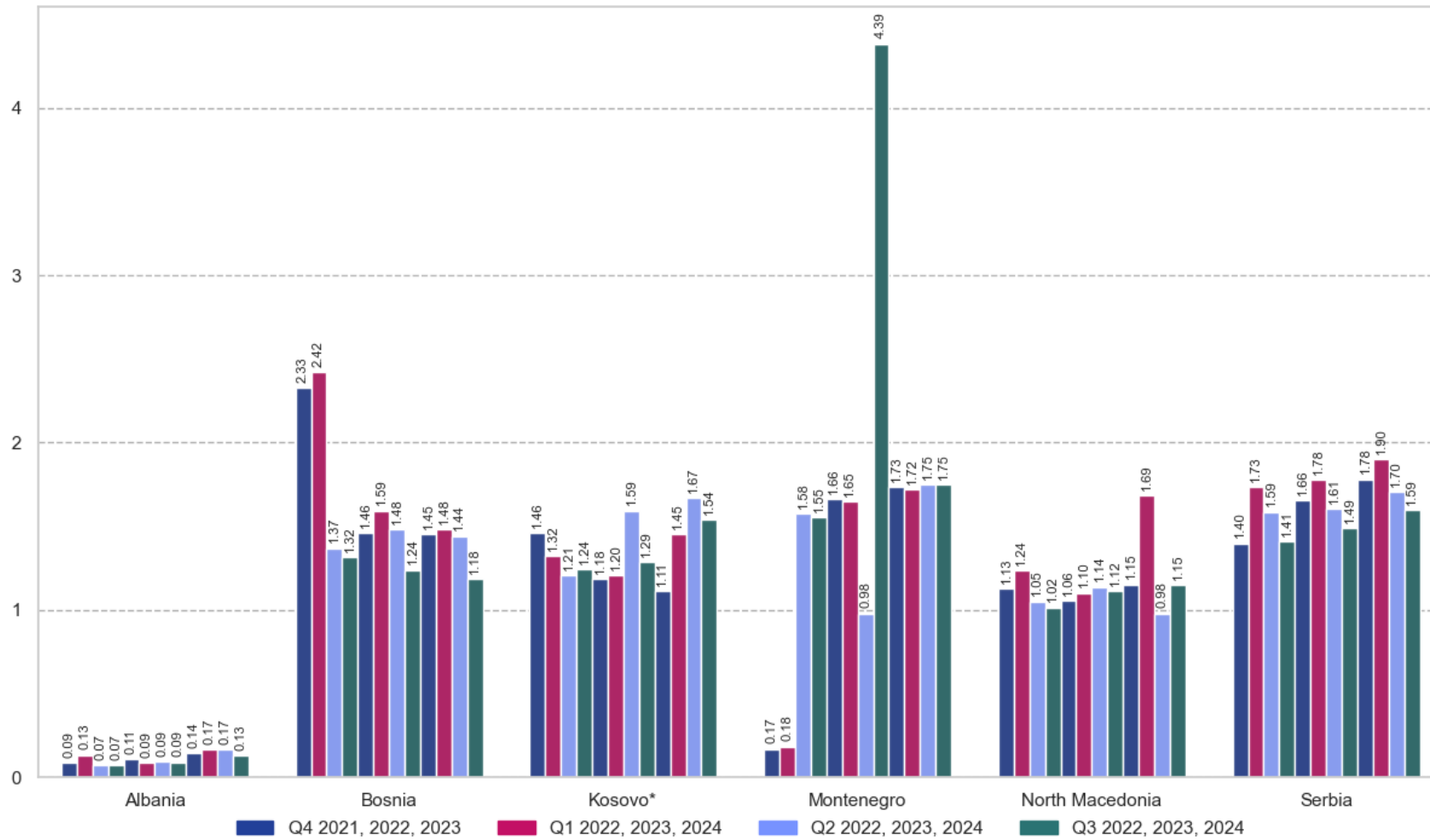
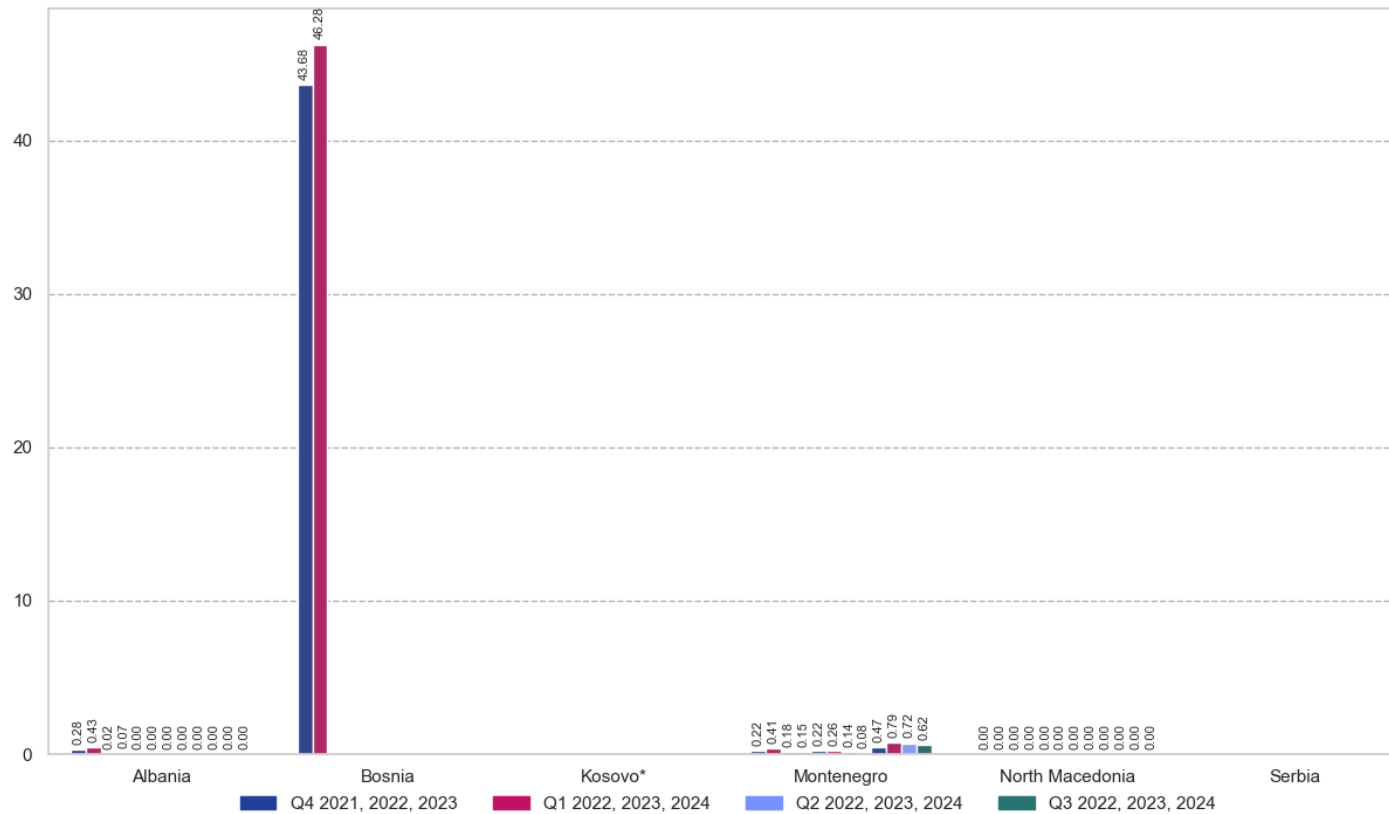


Figure 28: Average retail roaming revenues per minute, calls made (actual minutes), in Euro (within RoW countries)



5.2 Average retail roaming revenues per minute, calls received

Figure 29: Average retail roaming revenues per alternative WB roaming minute, calls received (actual minutes), in Eurocent (within WB)⁸



⁸ Serbia: Only one out of four providers sent the relevant data.

Figure 30: Average retail roaming revenues per WB RLAH+ and RLAH roaming minute, calls received (actual minutes), in Eurocent (within WB)

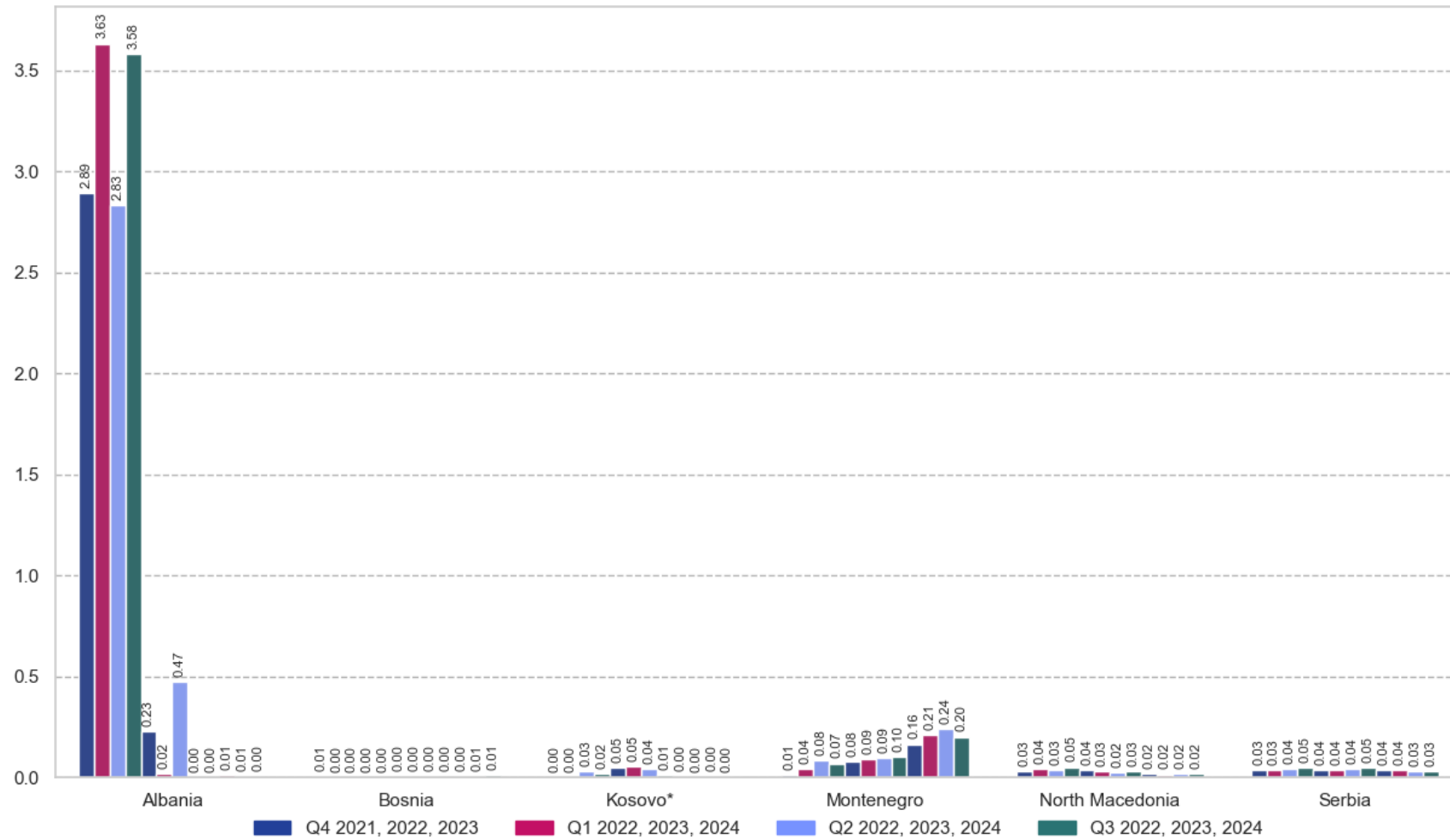


Figure 31: Average retail roaming revenues per minute, calls received (actual minutes), in Euro (within EEA countries)

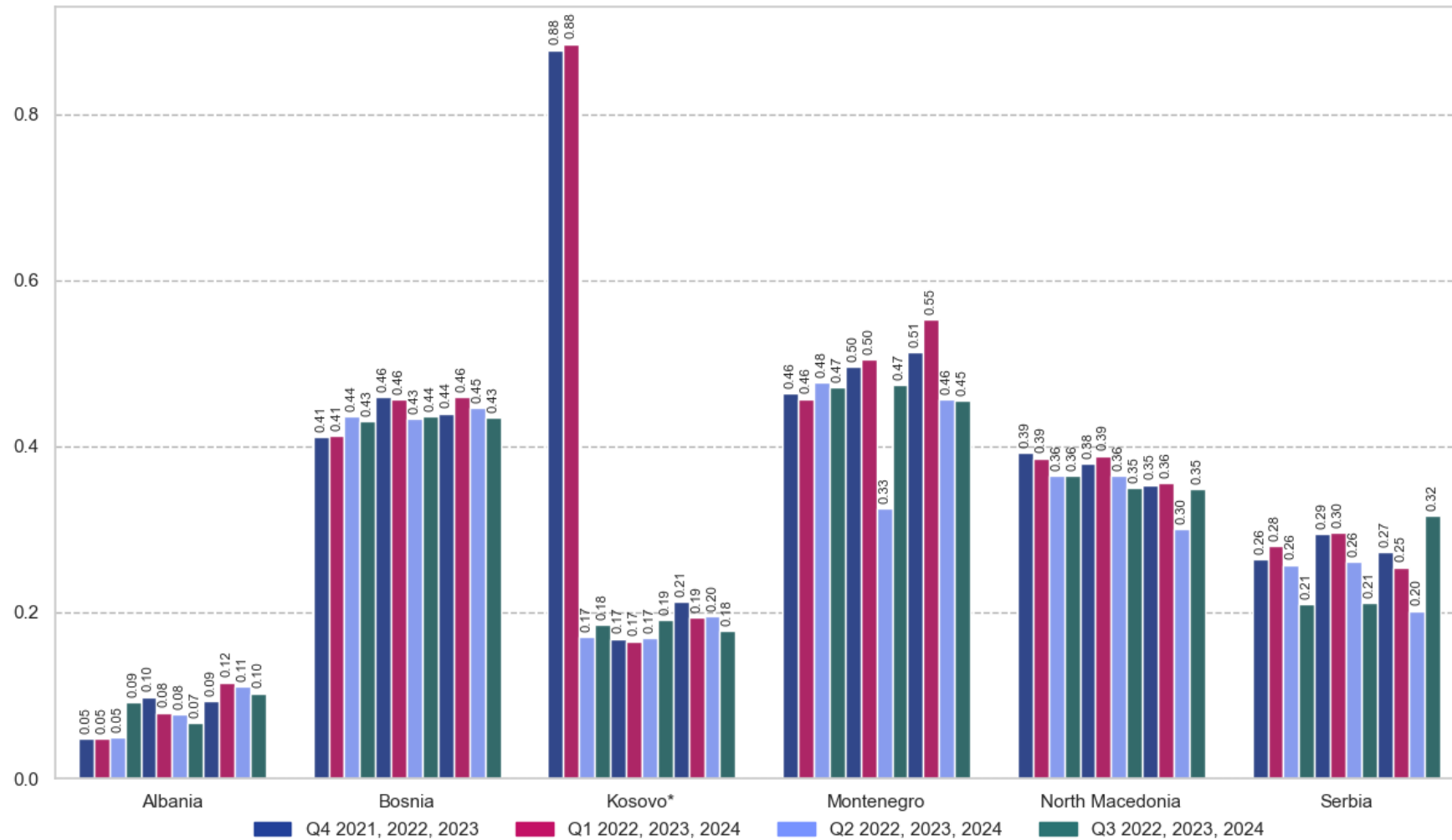
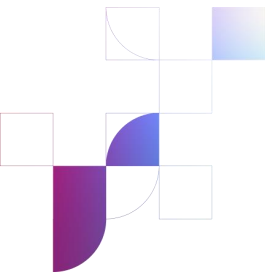
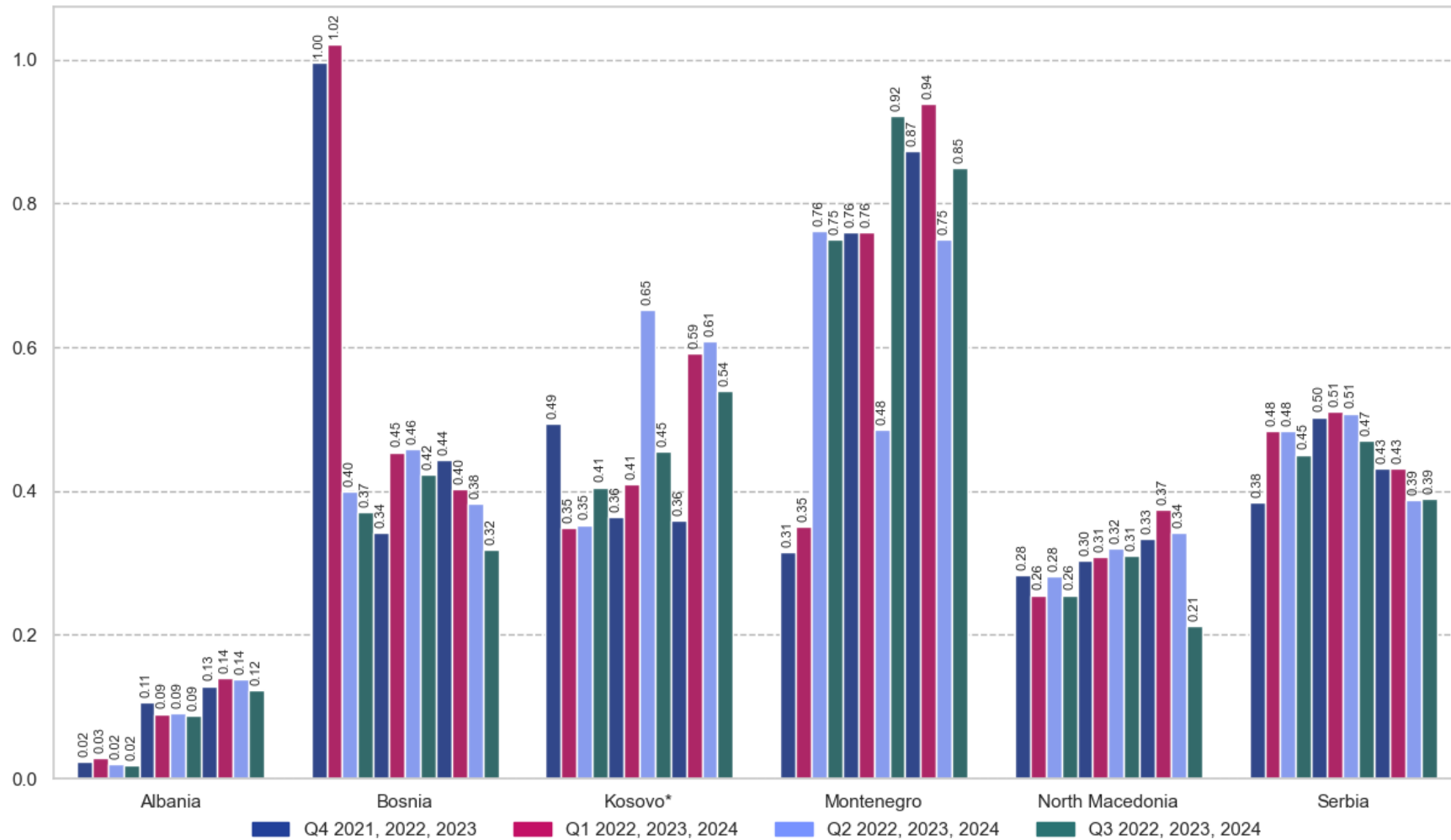


Figure 32: Average retail roaming revenues per minute, calls received (actual minutes), in Euro (within RoW countries)



5.3 Average retail roaming revenues per SMS

Figure 33: Average retail roaming revenues per alternative WB roaming SMS, in Eurocent (within WB)

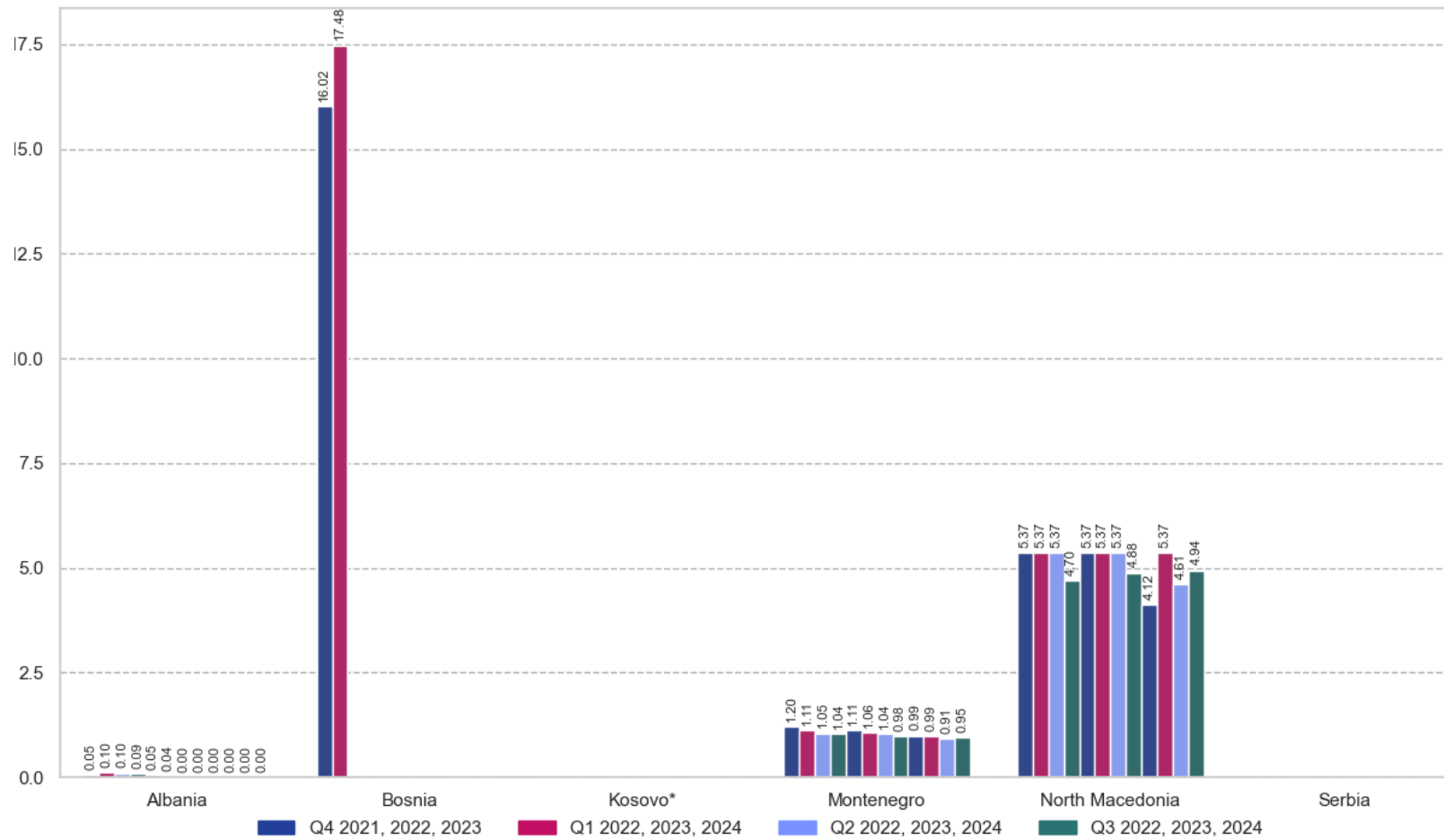


Figure 34: Average retail roaming revenues per WB RLAH+ and RLAH roaming SMS, in Eurocent (within WB)

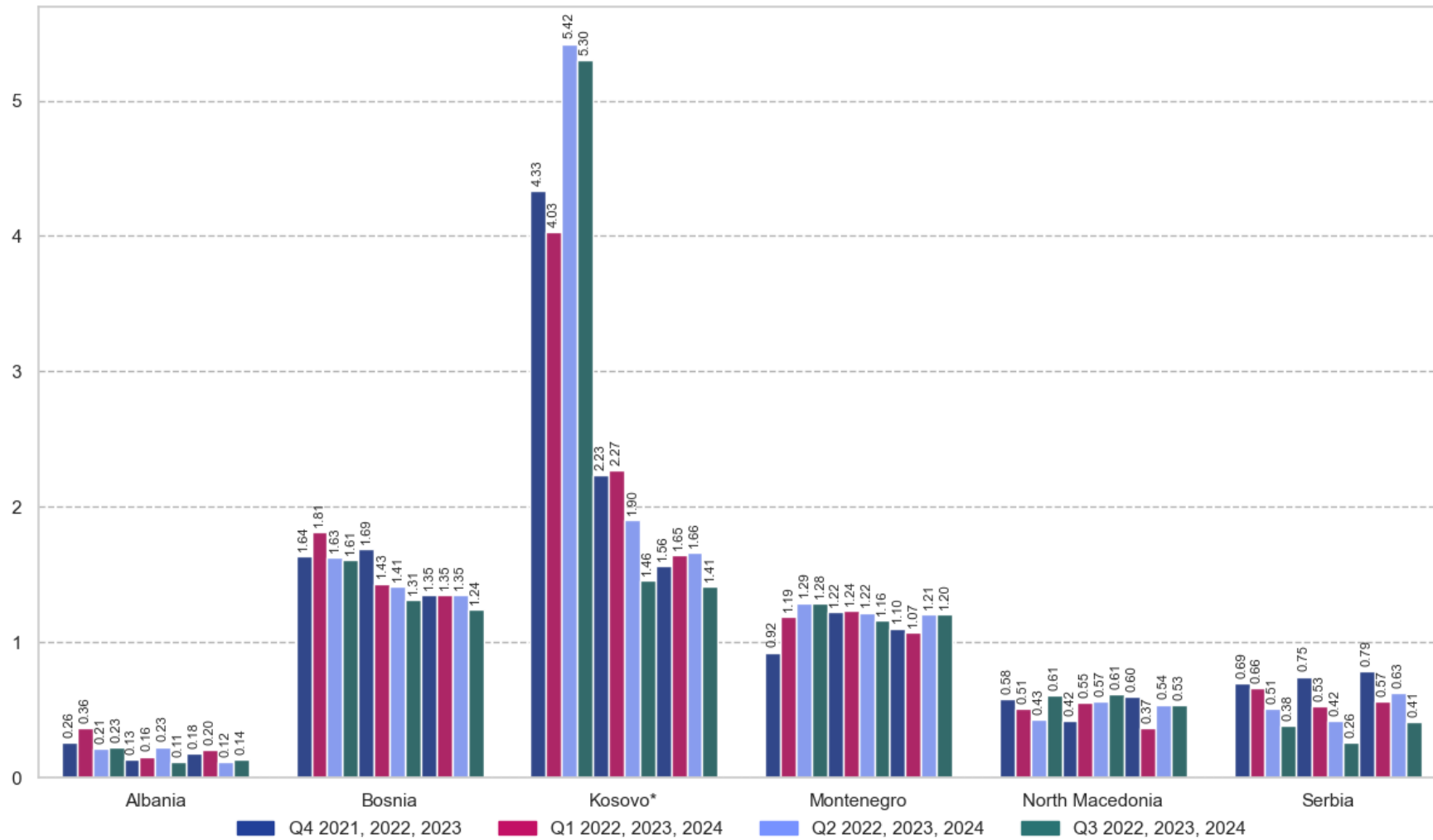


Figure 36: Average retail roaming revenues per SMS, in Euro (within RoW countries)

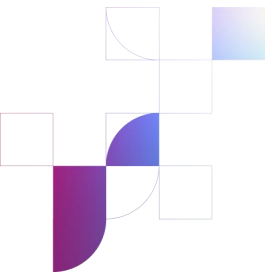
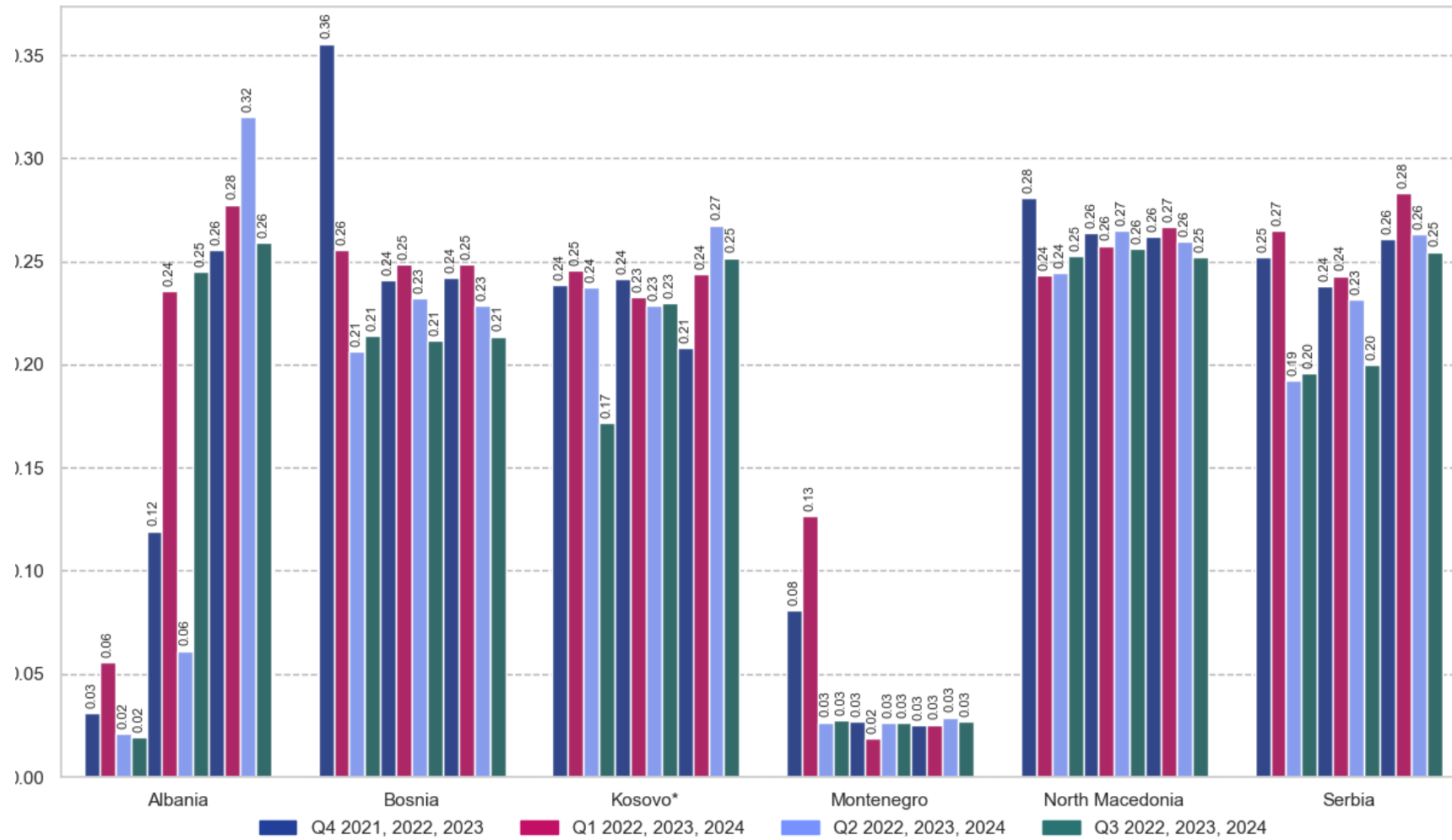


Figure 38: Average retail roaming revenues per WB RLAH+ and RLAH roaming GB, in Euro

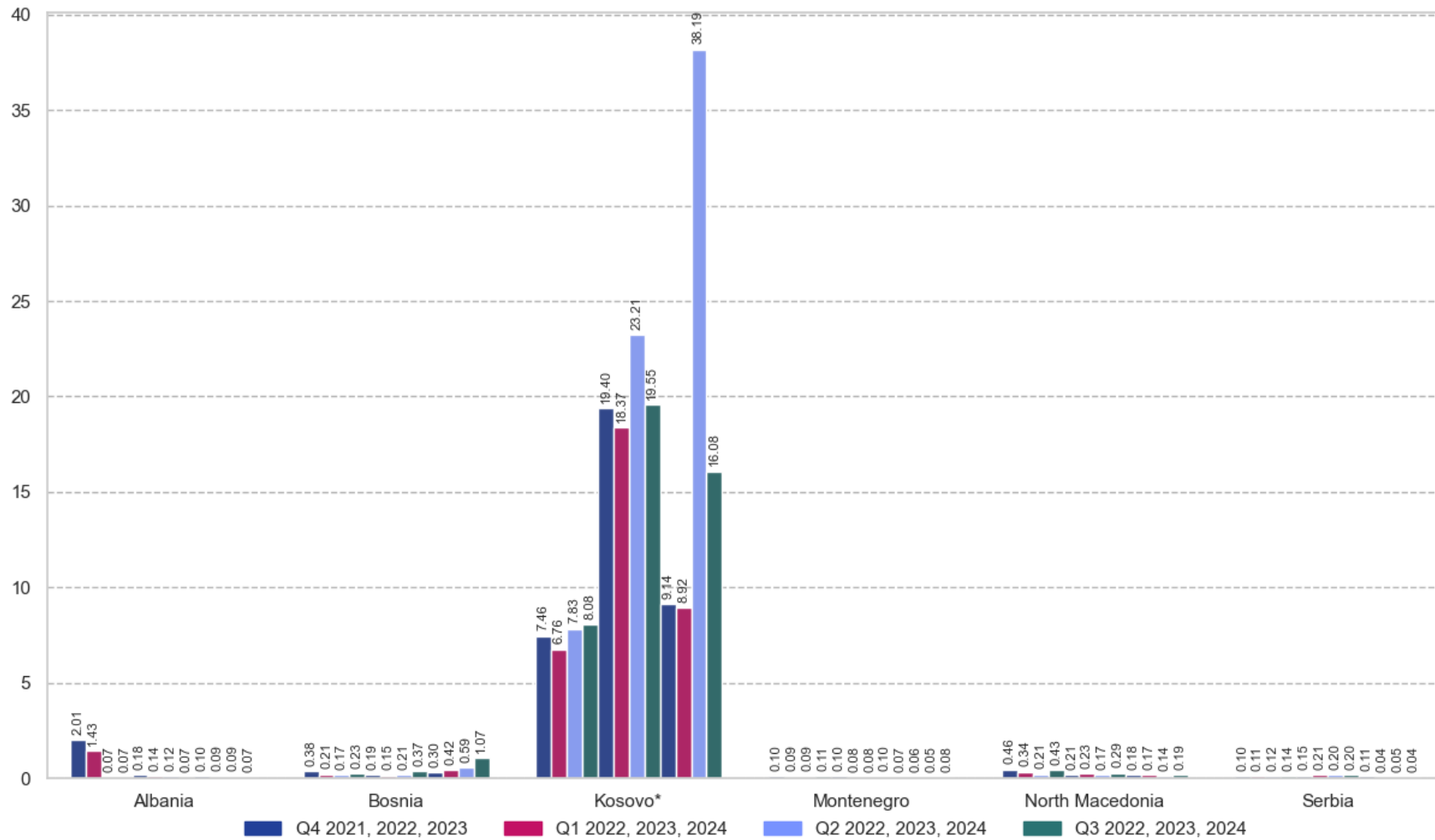


Figure 39: Average retail roaming revenues per GB, in Euro (within EEA countries)

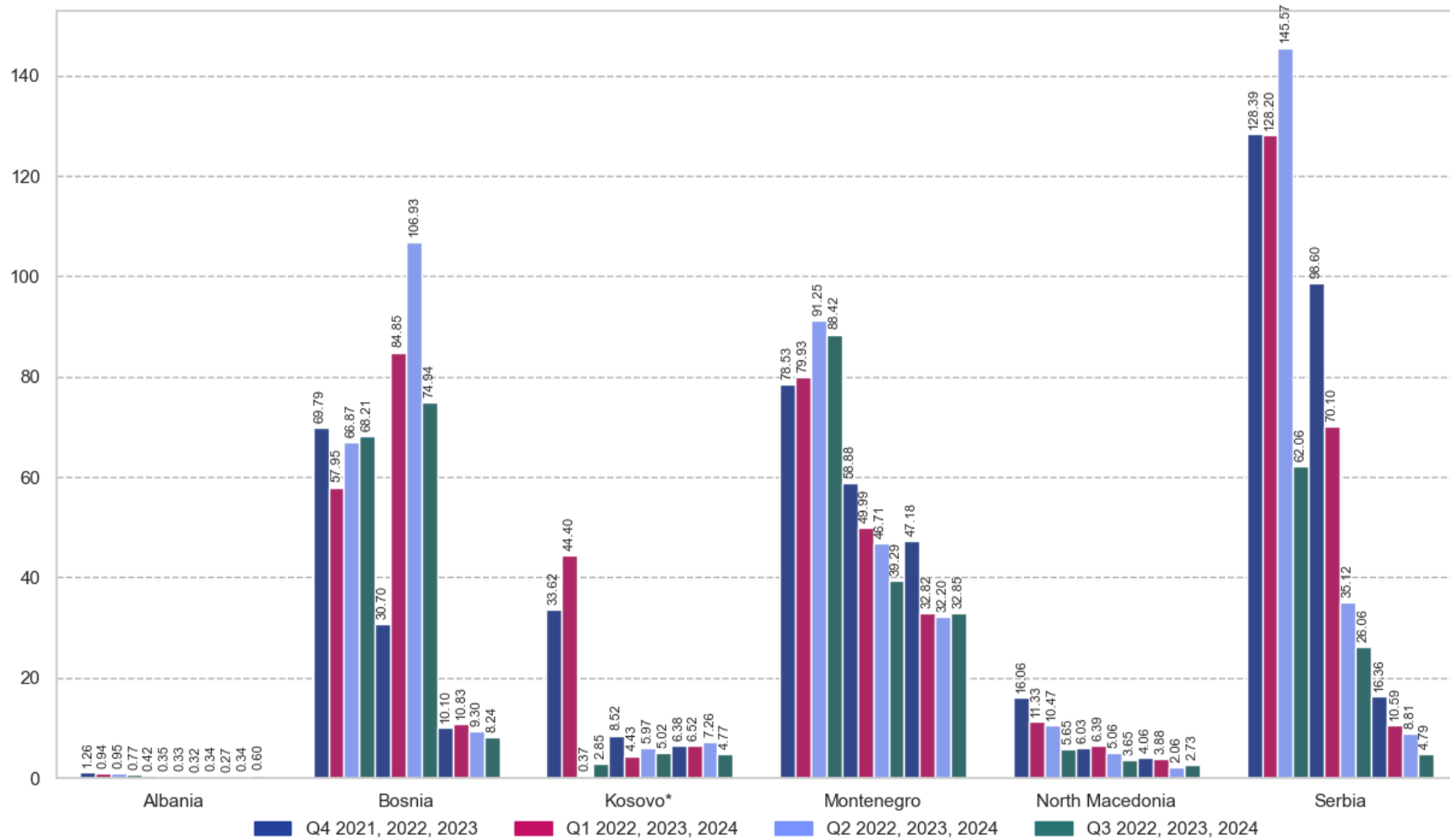
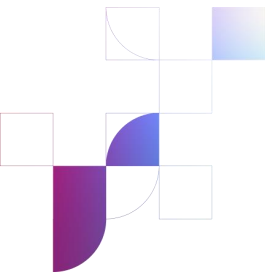
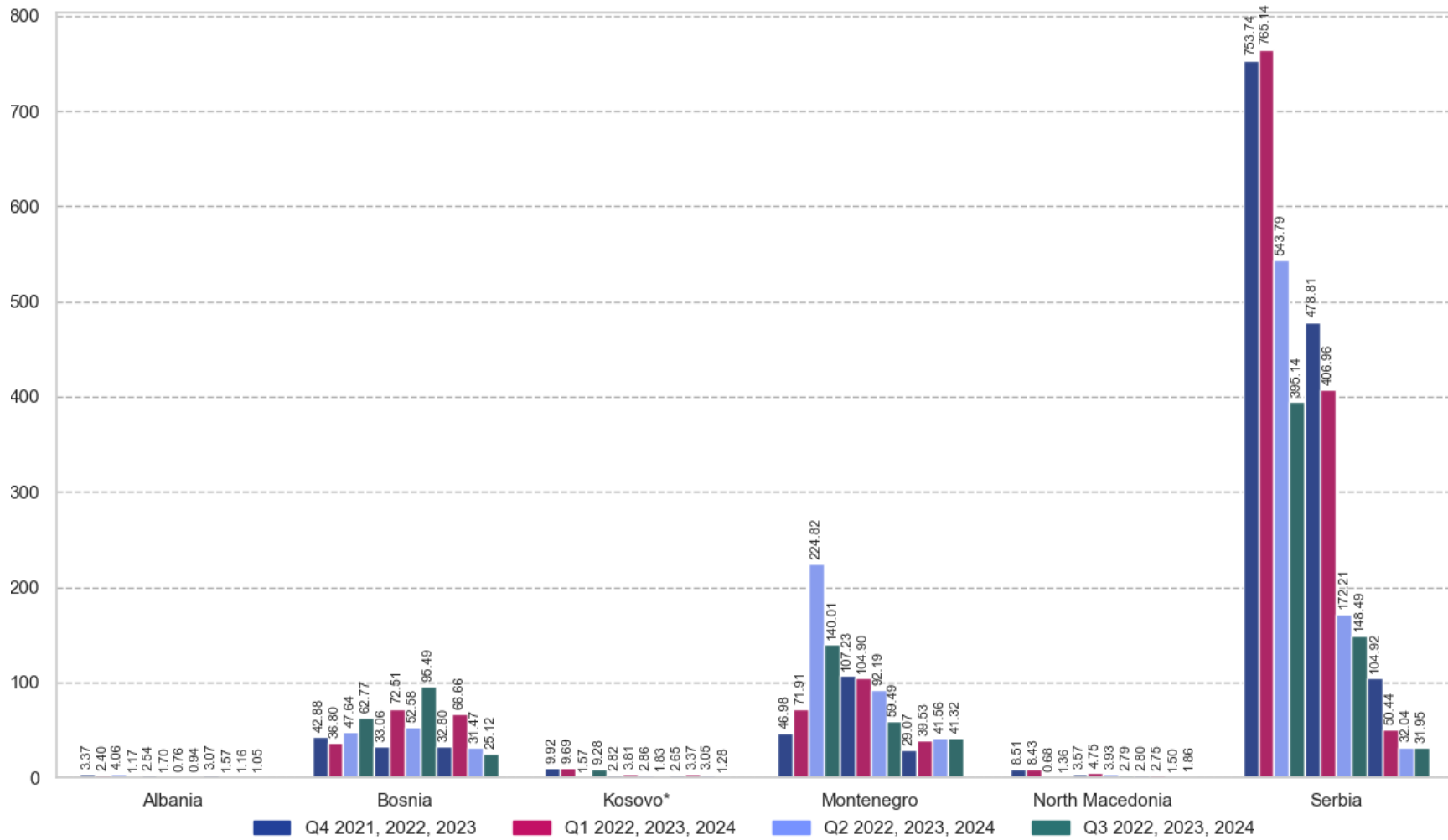


Figure 40: Average retail roaming revenues per GB, in Euro (within RoW countries)



6 The development of wholesale roaming services: wholesale revenues per unit

6.1 Wholesale voice roaming services: wholesale revenues per minute (group and non-group)

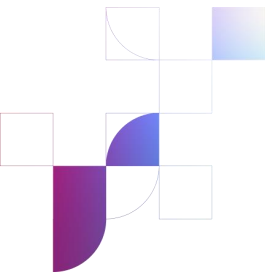


Figure 41: Wholesale revenues per minute (group and non-group) in Eurocent, within WB region

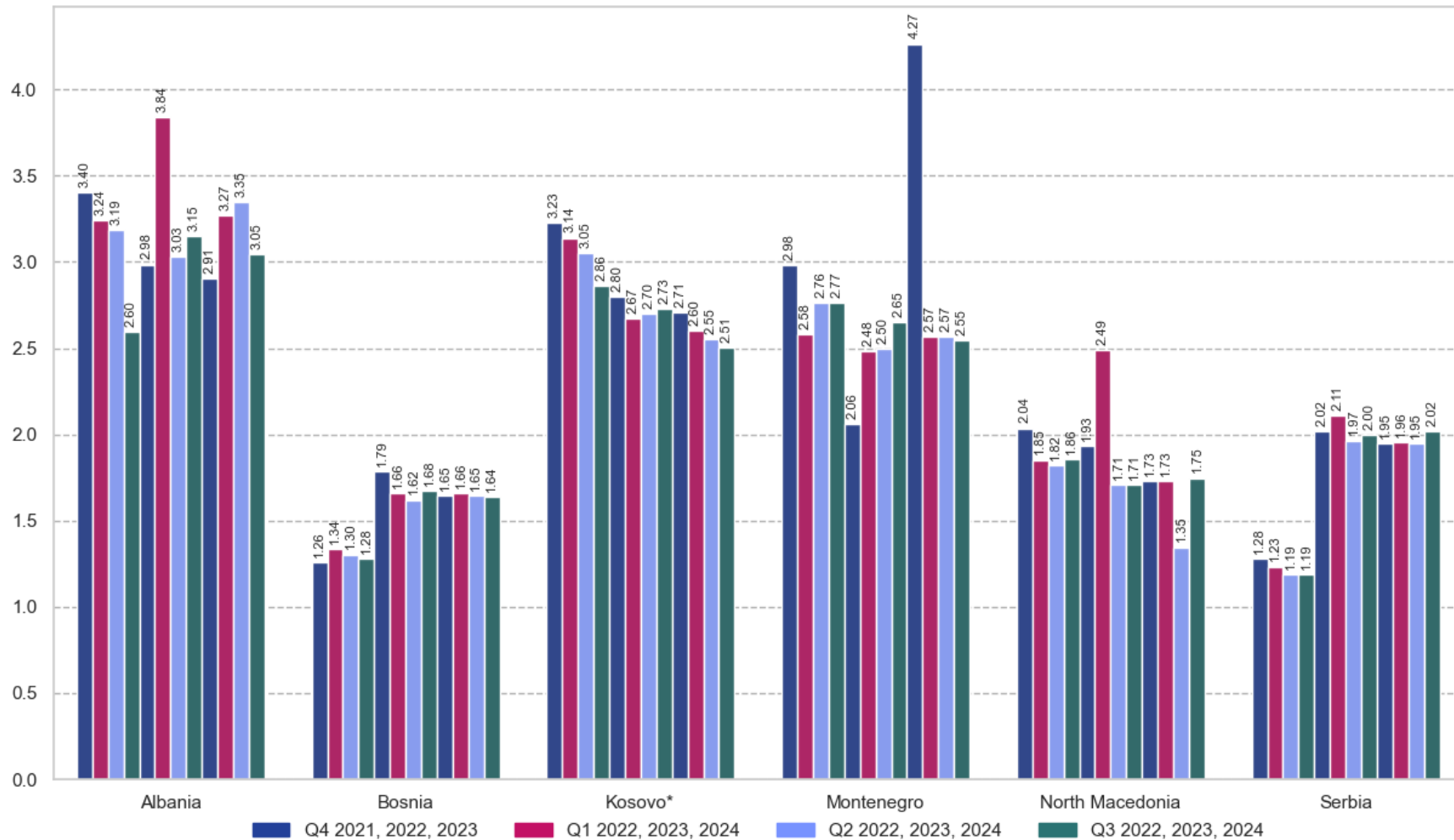


Figure 42: Wholesale revenues per minute (group and non-group) in Eurocent, from EEA countries

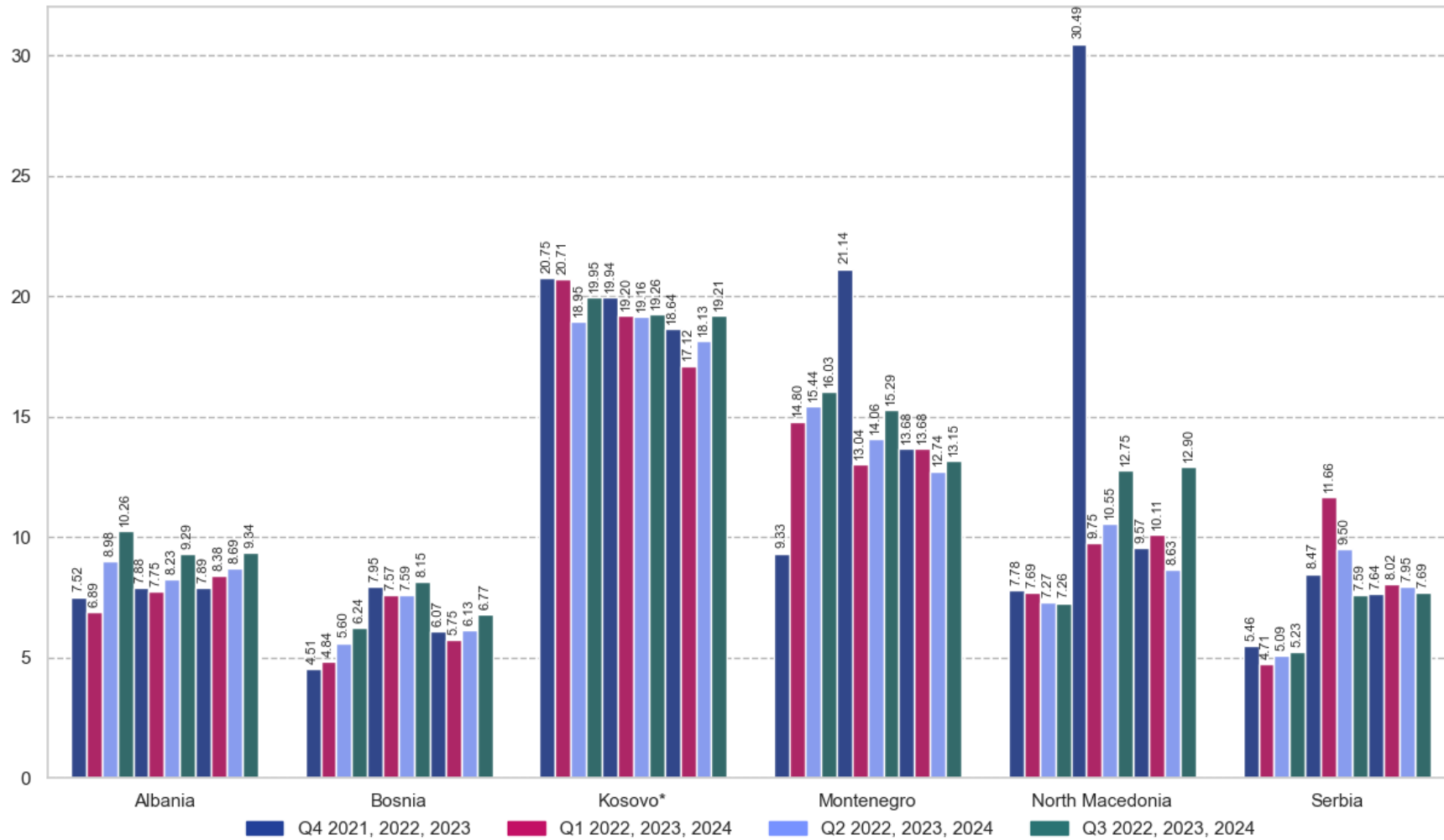
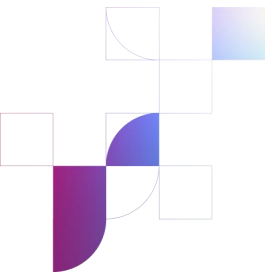
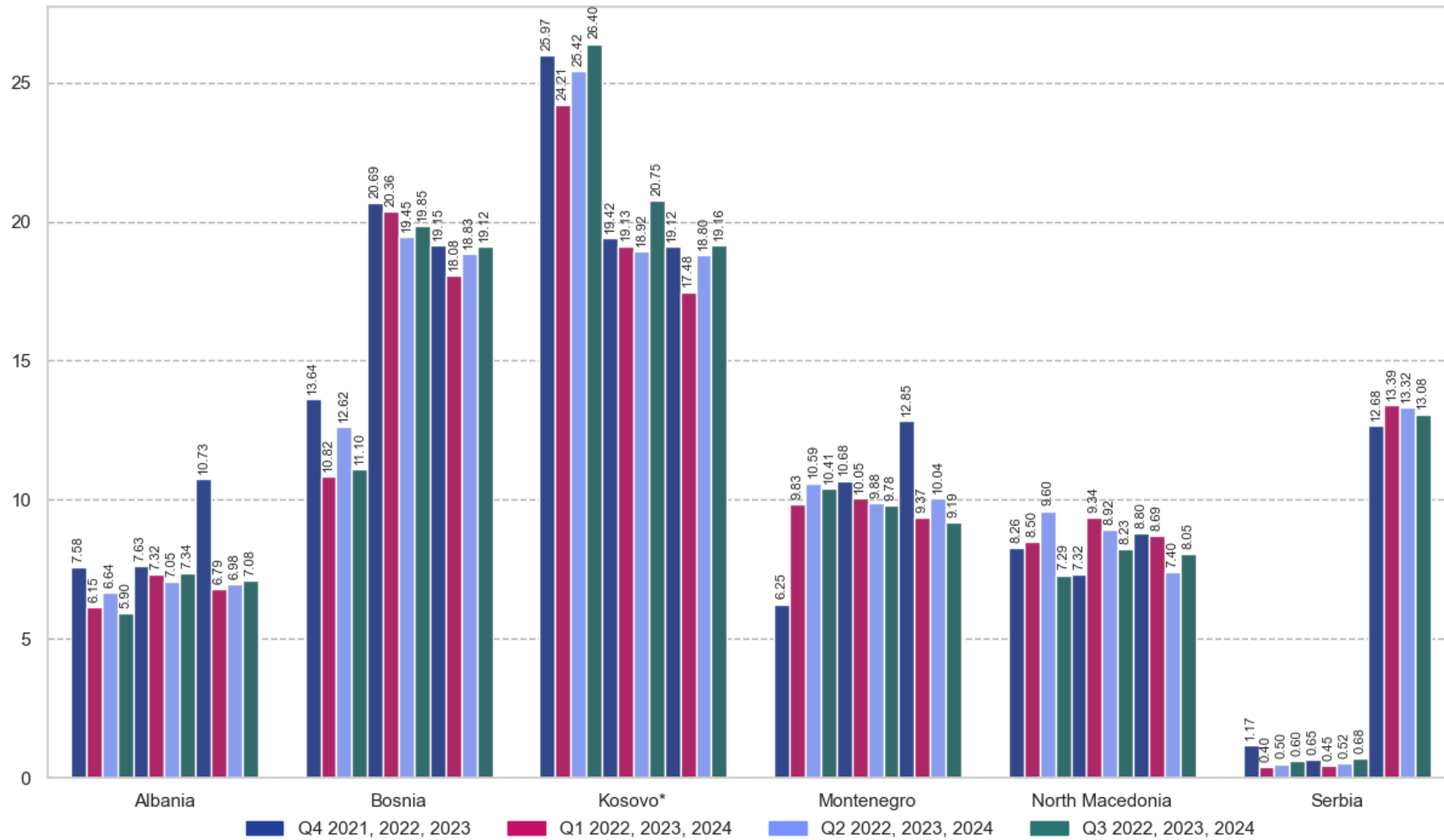


Figure 43: Wholesale revenues per minute (group and non-group) in Eurocent, from RoW countries



6.2 Wholesale SMS roaming services: wholesale revenues per SMS (group and non-group)

Figure 44: Wholesale revenues per SMS (group and non-group) in Eurocent, within WB region

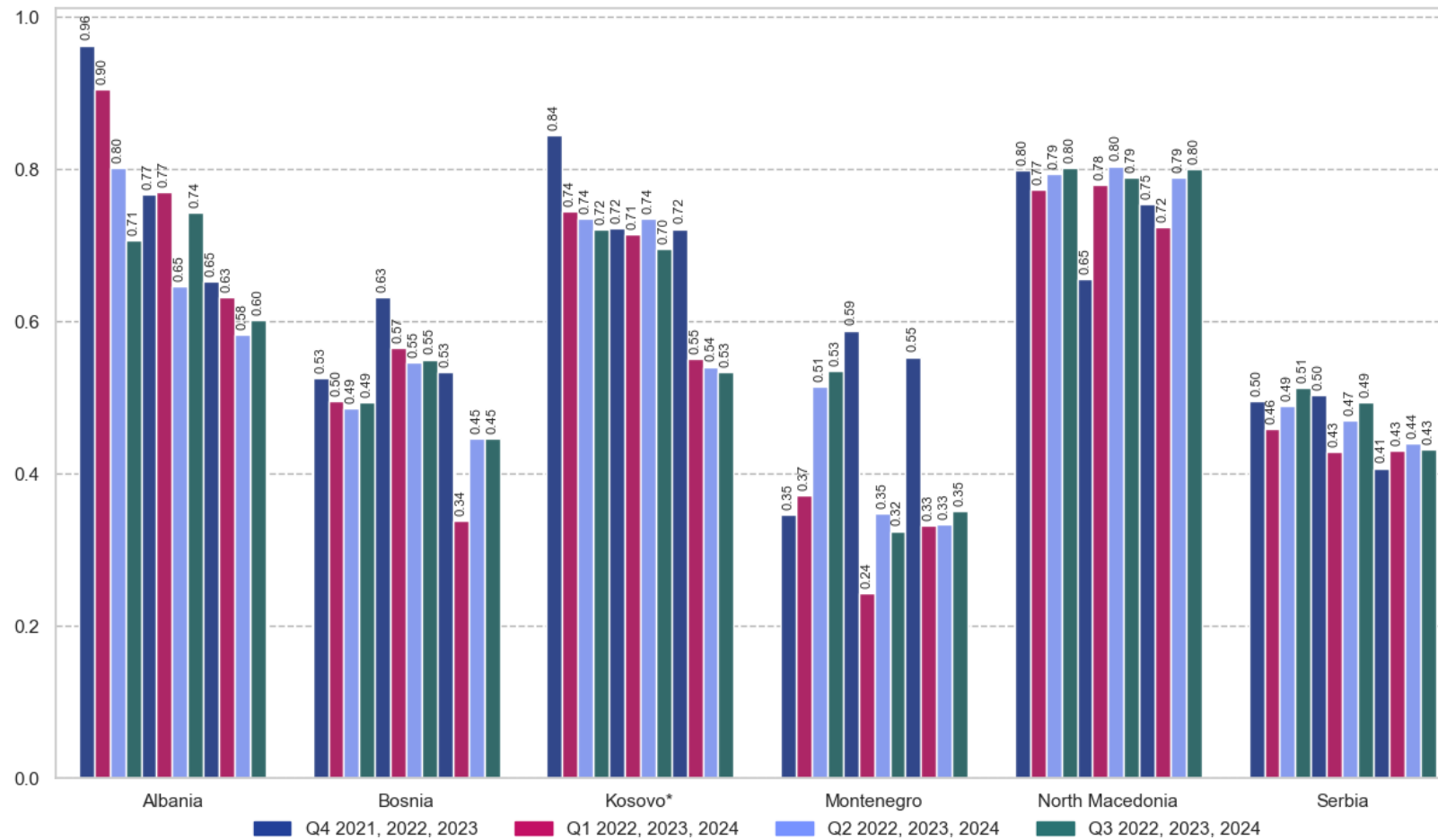


Figure 45: Wholesale revenues per SMS (group and non-group) in Eurocent, from EEA countries

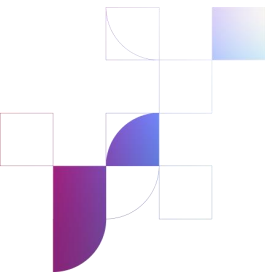
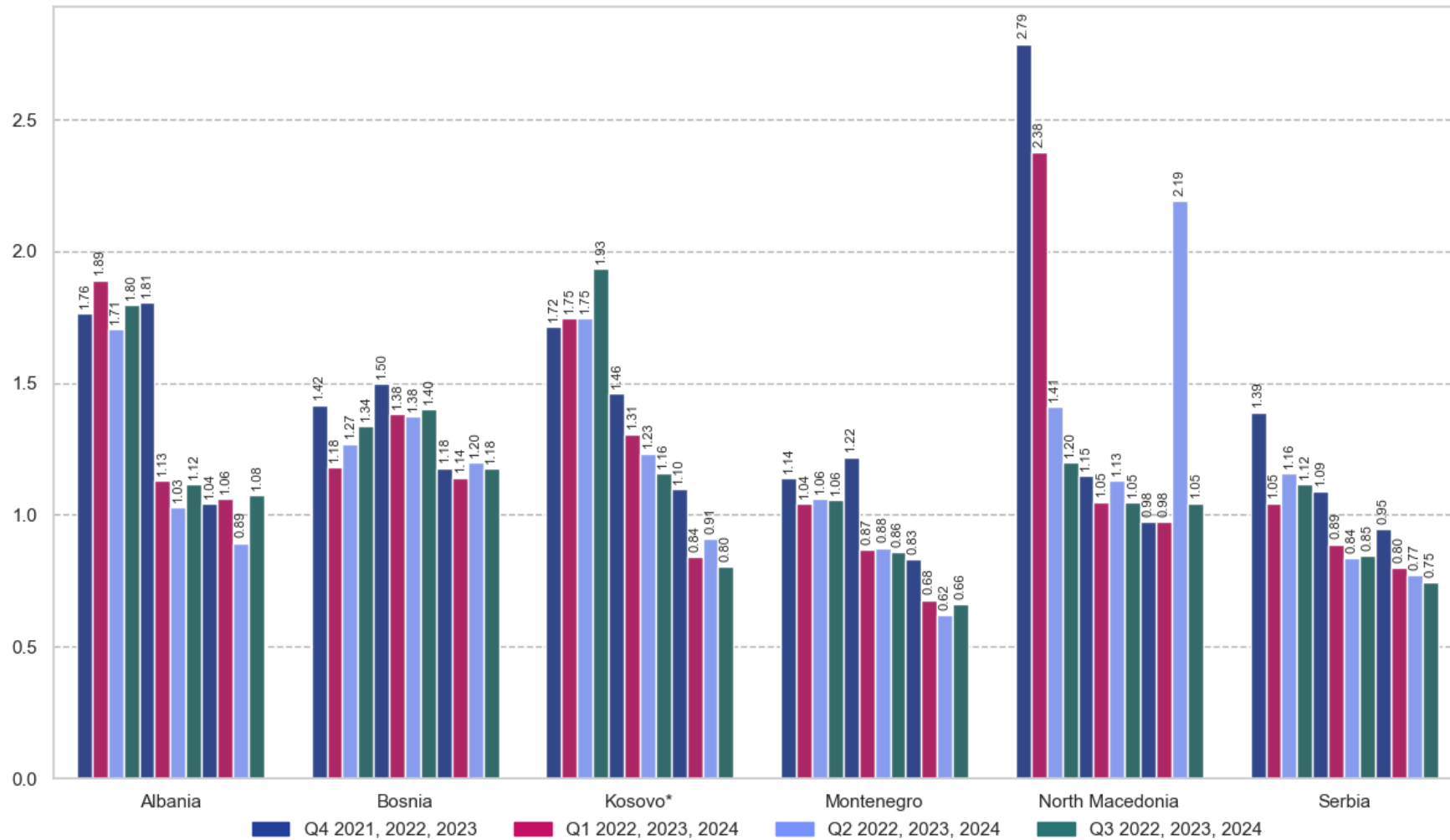
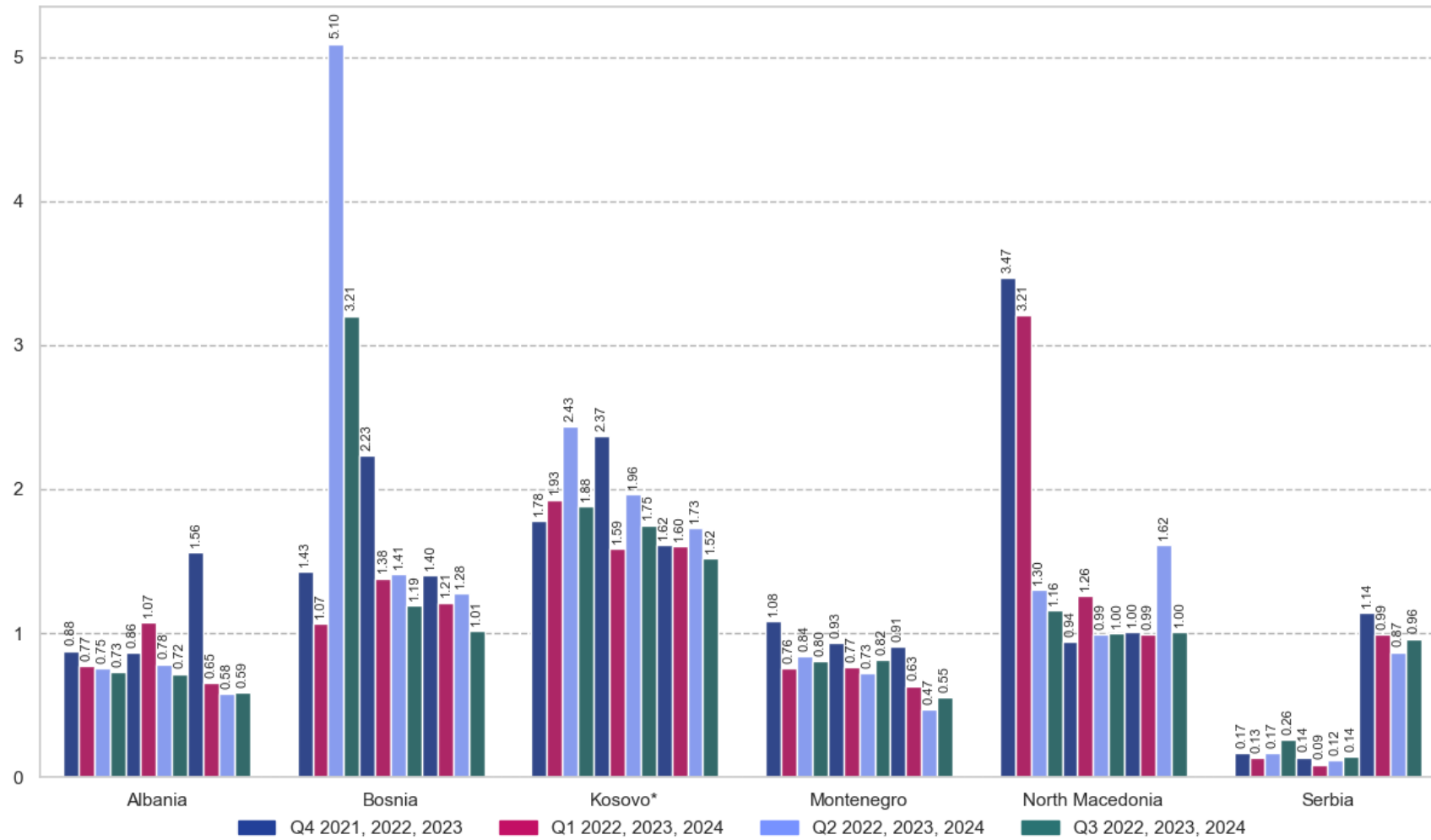


Figure 46: Wholesale revenues per SMS (group and non-group) in Eurocent, from RoW countries



6.3 Wholesale data roaming services: wholesale revenues per GB

Figure 47: Wholesale revenues per GB in Euro, within WB region

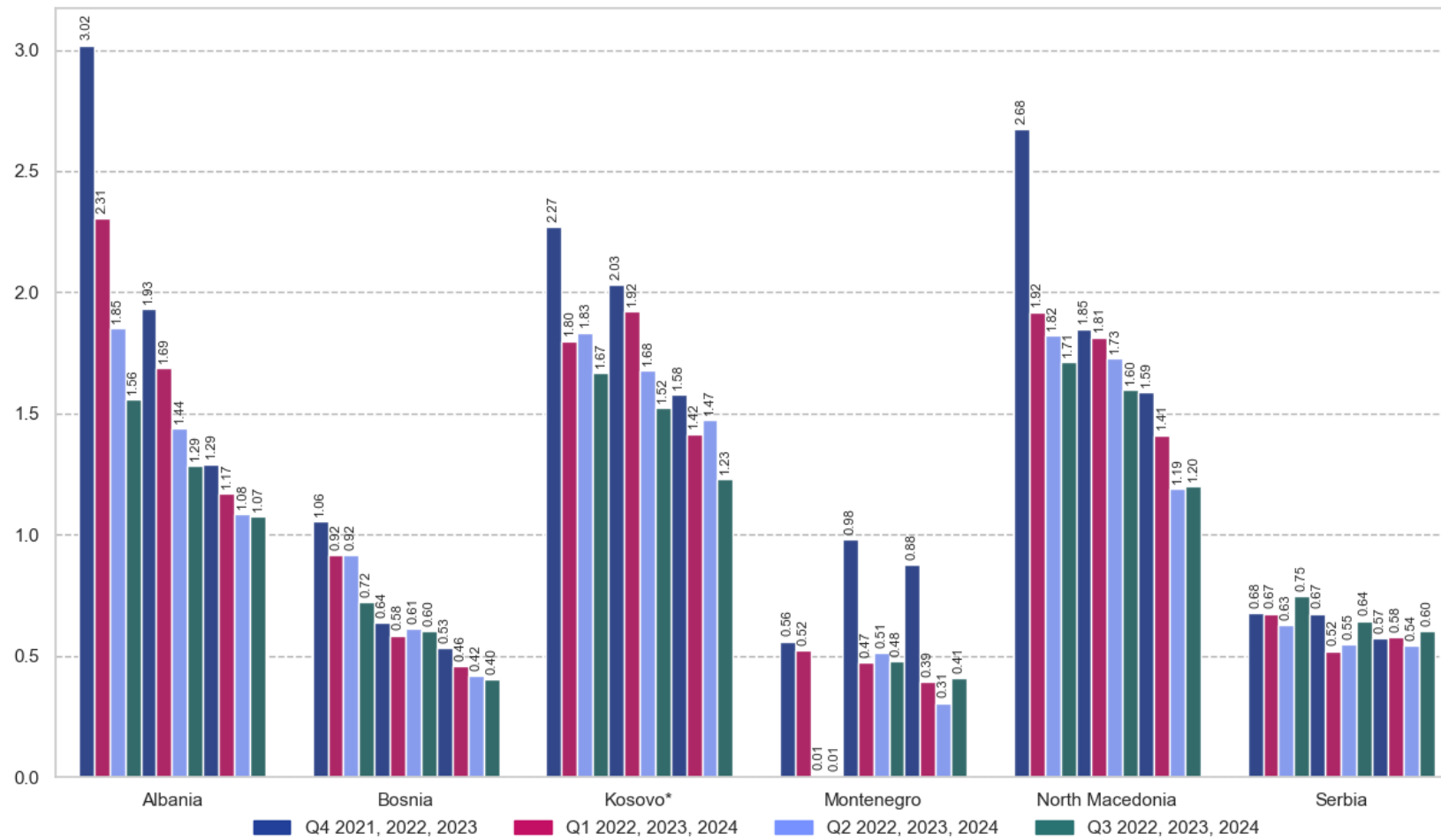


Figure 48: Wholesale revenues per GB in Euro, from EEA countries

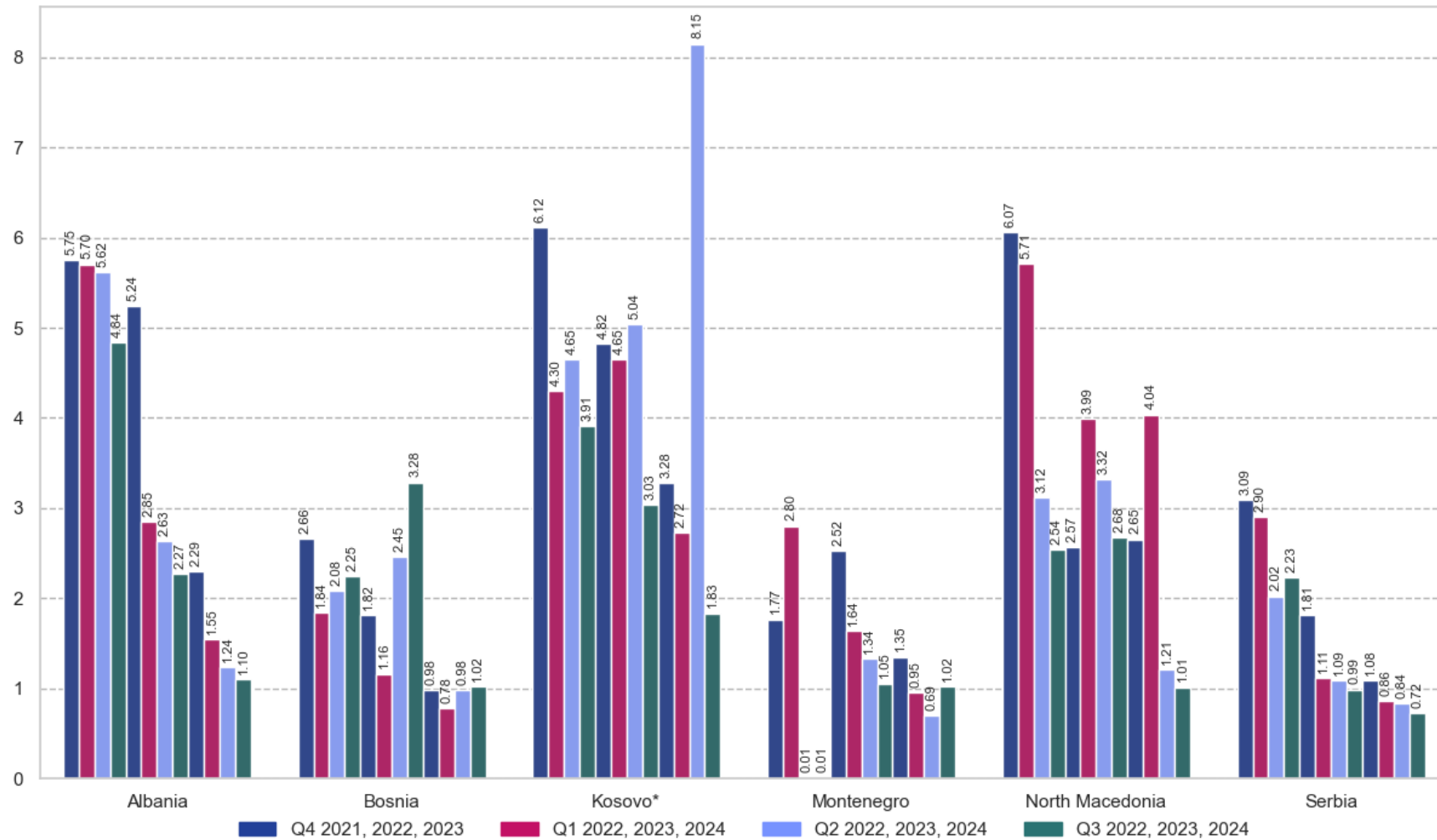
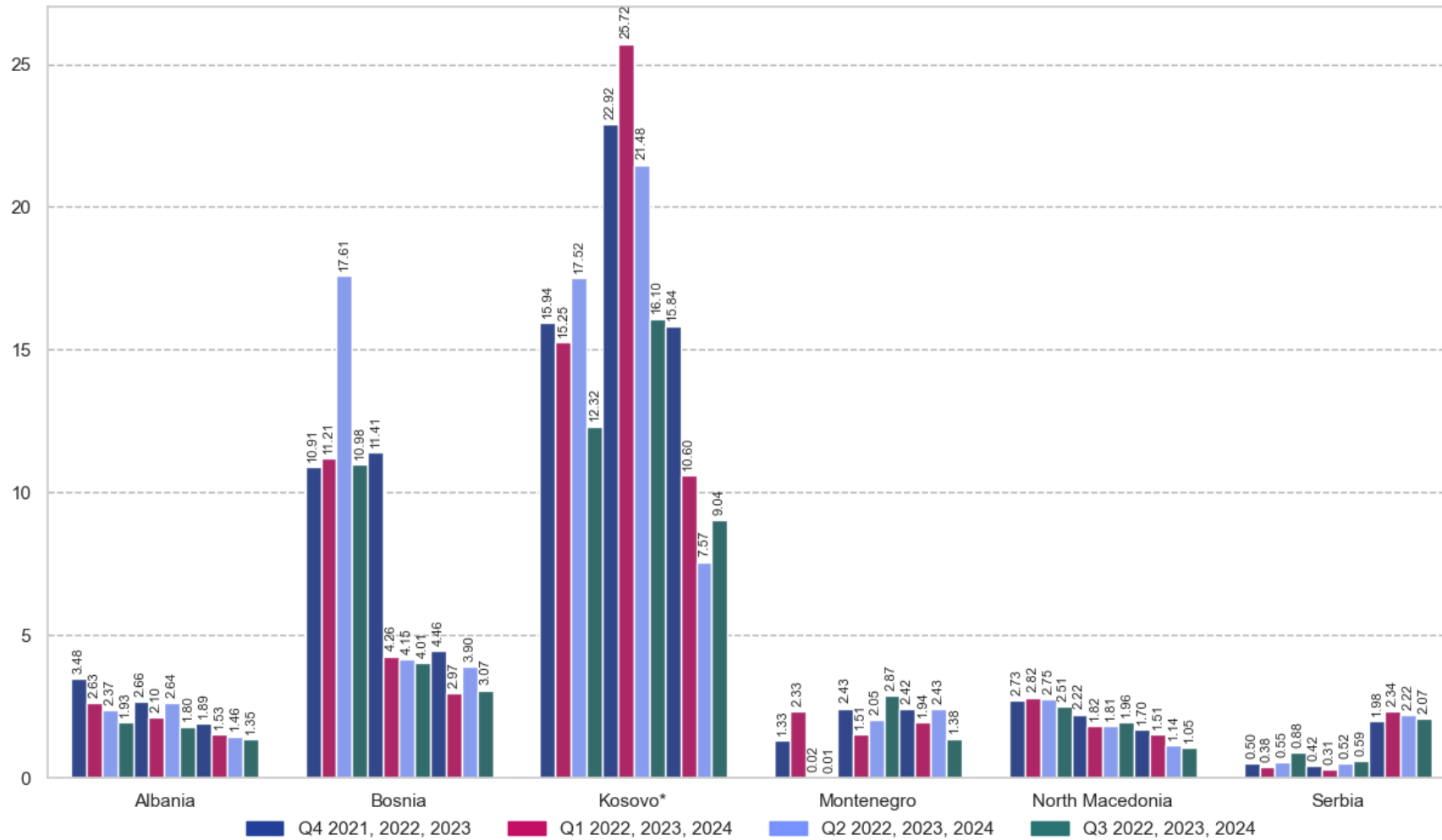


Figure 49: Wholesale revenues per GB in Euro, from RoW countries



7 Annex

The following chapter contains a list of national operators who submitted data during the data collection exercise. The data submitted by the operators has been aggregated for this report.

Albania

One Albania

Vodafone Albania

Bosnia and Herzegovina

BH Telecom d.d. Sarajevo

Telekom Srpske a.d. Banja Luka

JP Hrvatske telekomunikacije d.d. Mostar

Novotel d.o.o. Sarajevo

Blicnet d.o.o. Banja Luka

DASTO SEMTEL d.o.o. Bijeljina

Logosoft d.o.o. Sarajevo

HALOO d.o.o. Sarajevo

Kosovo

PKO Telecommunications LL.C

Telecom of Kosovo Sh.A

Montenegro

Crnogorski Telekom a.d Podgorica

Mtel d.o.o

ONE Crna Gora

North Macedonia

Makedonski Telekom

A1 Makedonija

Serbia

Globaltel d.o.o. (until 1 December 1 2023, acquired by Telekom Srbija a.d.)

Q1, Q2, Q3 2024:

Telekom Srbija AD

Yettel doo

A1 doo