



International Roaming

ERG Benchmark Data Report for
October 2007 – March 2008

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Section 1

Executive Summary

1.1 The Regulation on international roaming services (Regulation (EC) No 717/2007¹) has been implemented with a high level of compliance in all EU Member States. All consumers have access to a Eurotariff with capped maximum rates. Information gathered by the European Regulators Group (ERG) suggests that wholesale charges (set between operators) are also reducing in line with the regulated caps.

1.2 The active provision of tariff information through “push” SMS services and the ability to receive personalized tariff information through a free of charge phone number has been implemented successfully by all providers.

ERG Benchmark Report on International Roaming

1.3 This ERG Benchmark Report on International Roaming (the “Report”) presents the results of the second round of data collection on European international roaming services undertaken by ERG, covering the period 1 October 2007 to 31 March 2008. It also includes data from the first round of data collection (1 April to 30 September 2007) for comparison purposes. As such it completes one year of ERG data on international roaming, with around six months of full implementation of the Roaming Regulation: the Eurotariff was required to take full effect by 30 September 2007 and the average wholesale cap is calculated based on a 12-month period from the end of August 2007.

1.4 These Reports will provide information on the evolution of wholesale and retail prices for voice, SMS and data roaming services. This is intended to provide a sound evidence base for the Commission’s review of the Regulation, required by the end of 2008, and for any decisions regarding the extension of the Regulation. ERG notes, however, that it is early to fully assess the impact of the Regulation given factors like seasonality that cannot be fully measured yet.

1.5 The second ERG data collection provides evidence that national averages for wholesale and retail Eurotariff prices were in full compliance with the Regulation in all Member States. Average retail prices remain at or just below the maximum cap in around two thirds of Member States, however. At the wholesale level, there was clear decrease in the average rate in all countries compared to pre-Regulation. For SMS there appears to have been little movement in prices in most Member States, at the retail and wholesale levels. The average data price per megabyte shows a heterogeneous picture, particularly at the retail level where the differences in price between countries remains large, and some countries still have very high average prices. At the overall ERG level, however, it seems that both retail and wholesale prices for data roaming are following a downward trend.

1.6 There is also an indication that roaming minutes billed exceeded actual elapsed minutes by a significant margin (typically 24% at the retail level for calls made and 19% for call received²) as a consequence of the practice of many providers of using charging intervals of more than one second at both the wholesale and retail levels.

1.7 It is early to draw firm conclusions regarding the implementation of the Regulation; ERG will study trends in roaming charges in its subsequent reports, when data for a longer

¹ http://eur-lex.europa.eu/LexUriServ/site/en/oj/2007/l_171/l_17120070629en00320040.pdf

² This is in reference to the Eurotariff.

implementation period will be available. In particular, the next data collection for April – September 2008 will cover the first full peak travel season with the Regulation in force, and complete a year's data on implementation. ERG expects to publish that Report in early 2009.

Section 2

Introduction

2.1 The European Regulators Group (ERG) has been at the forefront of tackling the long standing issue of high prices for international roaming services. In 2005, ERG undertook a study of international roaming that concluded that the EC Regulatory Framework did not provide the necessary tool-kit for NRAs to tackle the problems identified. ERG wrote to the Commission in December 2005 highlighting its concerns.

The Regulation

2.2 On 8 February 2006, Commissioner Reding announced an intention to Regulate International roaming services with a “call for input” on how this might be undertaken³. ERG responded⁴ to the Commission’s proposals.

2.3 After significant debate, the final Regulation on international roaming services was published on 29 June 2007. The primary provisions cap wholesale and retail charges and set a number of transparency provisions, helping to ensure that consumers are well informed. The provisions of the Regulation entered into force at different times, with retail and transparency provisions taking full effect by the end of September 2007 and wholesale provisions calculated annually from the end of August.

This Report

2.4 According to the Roaming Regulation, in particular Art.7 and Art.11, individual NRAs are required, “...to monitor developments in wholesale and retail charges” (Art.7.3), and the Commission, “...to report to the Parliament and the Council no later than 30 December 2008”, on the functioning of the Regulation making use, if appropriate, “...of the information supplied pursuant to Article 7(3).” (Article11.1).

2.5 While the obligations are addressed to individual NRAs, ERG considered that it could add value by pursuing the following objectives:

- Simplify the process, not only for NRAs as ERG has acted as a central point for the data collection, but also for the Commission, as the data is received from a single source and following data processing, which gathers all the information and checks it for inconsistencies
- Coordinate the actions of individual NRAs, as the data collection exercise has made use of a single and commonly agreed data collection model, and the process is synchronised and based on the same collection periods
- As far as possible, provide a common response to the different questions posed during the collection process by operators and NRAs, as ERG has served as the forum where these questions have been commonly debated and addressed

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http://ec.europa.eu/information_society/activities/roaming/roaming_regulation/first_phase/index_en.htm

⁴ http://www.erg.eu.int/doc/whatsnew/erg_response_22_march_2006.pdf and http://www.erg.eu.int/doc/whatsnew/erg_response_11_may_2006.pdf

2.6 In addition, ERG considered it important to collect and publish a wider range of information than that explicitly set out in Articles 7 and 11 in order to give a full picture of the effect of the Regulation and the state of evolution of the roaming market. ERG therefore consulted not only the market players (during September 2007) but also the Commission before finalising its data collection template.

2.7 ERG believes that the information collected in existing and subsequent reports should provide a sound basis for the Commission's review of the Regulation required by the end of 2008, and for any decisions regarding the extension of the Regulation.

2.8 This Report is the second in a series of reports that ERG will produce providing an overview of international roaming across the EU. This Report covers the period just after the implementation of the Regulation (October 2007 – March 2008).

2.9 ERG has also included data from the first Report (April 2007 – September 2008) for comparison. ERG considers that the data collected from just before the implementation of the Regulation can serve as a "benchmark" against which data from after implementation can be assessed. However, due to the highly seasonal nature of the roaming market, due care must be taken when comparing different periods of time; comparing subsequent periods without taking seasonality into account could lead to invalid conclusions.

2.10 Following publication of the first Report,⁵ some operators provided more accurate data for the period April 2007 – September 2007. These updates have been incorporated into the data used in this Report, which may create some inconsistencies with the first Report. In such cases, the data from this Report take precedence. Similarly, it is possible that certain data in this Report might be updated in the next Report covering April – September 2008.

Methodology for data collection

2.11 ERG consulted on a draft version of its data questionnaire during September 2007. Following comments received, ERG amended the data questionnaire sent to providers⁶, with accompanying Explanatory Memorandum in October 2007. Information gathered as part of this exercise has been used in the formulation of this Report.

2.12 After the first round of data collection and publication of the first Report, the questionnaire was slightly altered to gain a better understanding of the difference between group and non-group data roaming prices and SMS roaming prices, at the retail level.

2.13 The information gathered for this Report covers both retail and wholesale prices for voice, SMS and data roaming services. In addition, information was gathered on traffic steering and inadvertent roaming. Each NRA aggregated individual provider data to provide a national aggregate to ERG. Therefore, only national aggregated data appears in this Report.

2.14 Over 140 providers of international roaming services provided information for this Report. These include virtually all mobile operators in the EU, as well as a significant number

⁵ http://erg.eu.int/doc/publications/erg_07_85_intl_roaming_rep.pdf

⁶ http://www.erg.eu.int/doc/publications/erg_07_47_rev1_data_model_spec_roaming_reg.xls
http://www.erg.eu.int/doc/publications/erg_07_47_rev1b_data_model_spec_on_roaming_reg_exp_mem.pdf

of MVNOs that provide roaming services in the EU⁷. ERG estimates that this covers around 95% of EU consumers using international roaming services today.

Format of the report

2.15 The main body of this Report is set out in Section 3 below, which provides an overview of the data gathered to date. Section 4 provides a summary of compliance issues reported to NRAs and outlines some proposals for future data collections. Section 4 gives explanations for some “anomalous” results, which in some cases may not be a fair reflection of reality. Annex 1 lists the providers that supplied information to NRAs for inclusion in this report.

⁷ Operators, and MVNOs, from both Norway and Iceland (which adopted the Regulation in January 2008) also contributed to the data collected as part of this report.

Section 3

Overall data summary

3.1 All EU countries took part in this data gathering exercise; Iceland and Norway also participated, given the extension of the Regulation to those countries from December 2007. A comprehensive range of information was requested by NRAs from their national providers of international roaming services.

3.2 The data presented below represents the results of both the first and the second ERG data collections, and provides an overview of international roaming for the period 1 April 2007 to 31 March 2008, split by calendar quarter.

3.3 Given that the provisions of the Regulation did not take full effect until the end of September 2007, the data for the first Report was collected on a “best efforts” basis and should not be considered complete or comprehensive. For the second collection, unfortunately some providers were still unable to provide all of the data requested, despite the expectation expressed by NRAs that they would upgrade their systems in time. In some cases this has led to best estimates being provided where actual data was not available, or no data being provided if estimates were considered too imprecise.

3.4 The second data collection shows the first real effects of the Regulation, as it covers the first six months of full implementation. ERG believes the data shows the successful implementation of both the wholesale and retail (Eurotariff) voice roaming caps, consistent with the requirements of the Regulation.

3.5 The second collection also indicates that for the Eurotariff, billed minutes exceeded actual elapsed minutes by a significant margin (on average 24% for calls made and 19% for calls received) as a consequence of the practice of many providers of adopting a minimum charging interval of up to 1 minute. ERG also notes a difference, on average, of 22% - 24% between billed and actual elapsed minutes for wholesale voice roaming (non-group companies).

3.6 Considering roaming services that are not currently subject to price regulation, ERG observes that average wholesale and retail prices for SMS roaming services have varied little over the last year.

3.7 Average prices for inbound⁸ wholesale data roaming services appear to be on a downward trend and the distribution of prices seems to have narrowed for quarter four 2007 and quarter one 2008 compared with quarters two and three 2007. Average retail prices are more heterogeneous, however, with a wider distribution of prices and with some countries still experiencing very high prices. The overall ERG trend is downwards, nonetheless.

3.8 ERG notes that it is early to fully assess the impact of the Regulation given factors like seasonality that cannot be fully measured yet – a full year’s data on implementation of the Regulation and a year of more comprehensive SMS and data roaming data will not be available until the next Report (SMS and data prices for quarters two and three 2007 should be considered indicative only). The next Report will better enable evaluation of the effects of the Regulation and market trends, therefore.

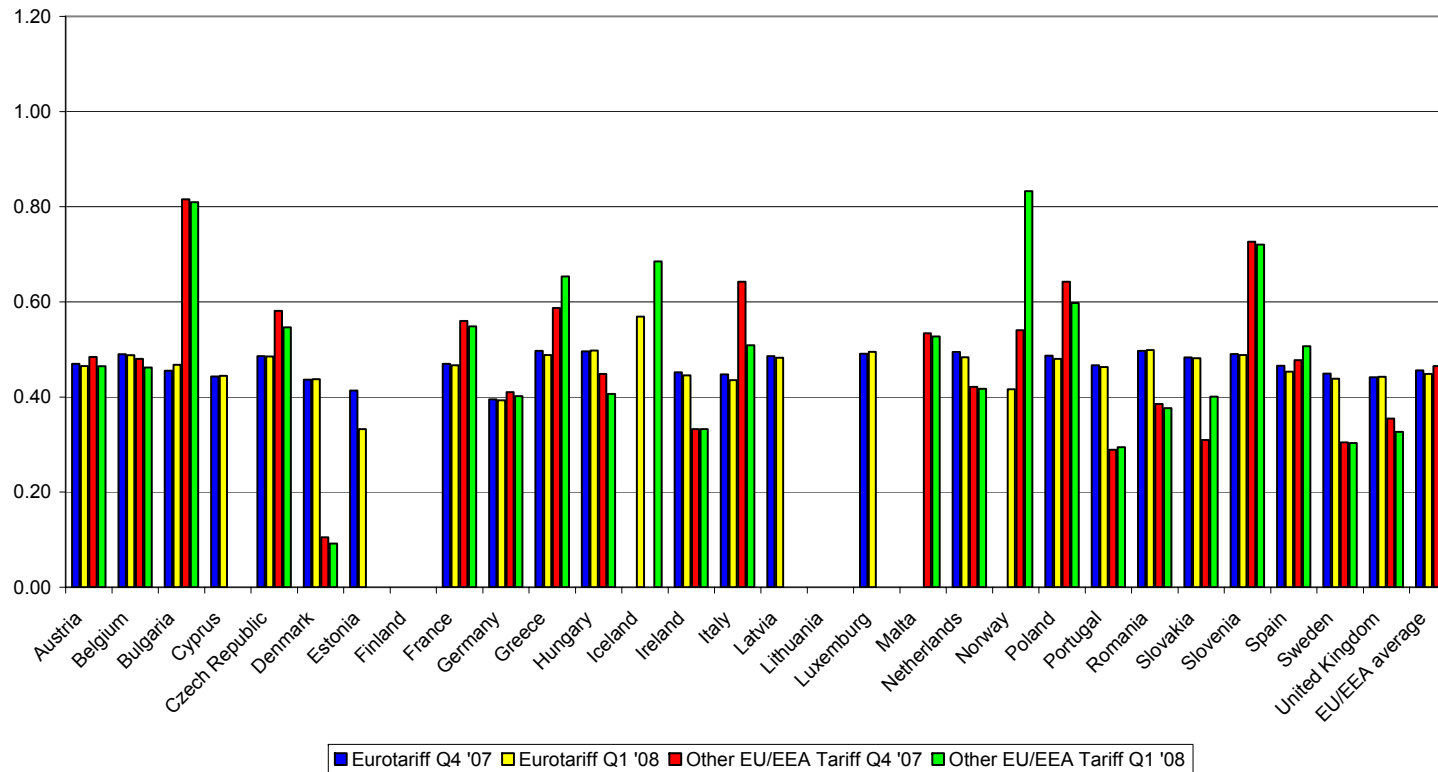
⁸ For wholesale data roaming services, ERG collects information on prices charged by the host operator to the roaming customer's home operator, referred to as "inbound" wholesale data roaming services.

3.9 For ease of comparison, all retail prices included in the charts below exclude VAT. They are an average of prices paid by post-pay and pre-pay customers. Prices paid by “special corporate” customers⁹ are not included. All averages are based on billed minutes of voice call or billed megabytes of data, unless stated otherwise.

⁹ This means undertakings that have negotiated a bespoke tariff for international roaming that is not available to individual customers.

Retail voice

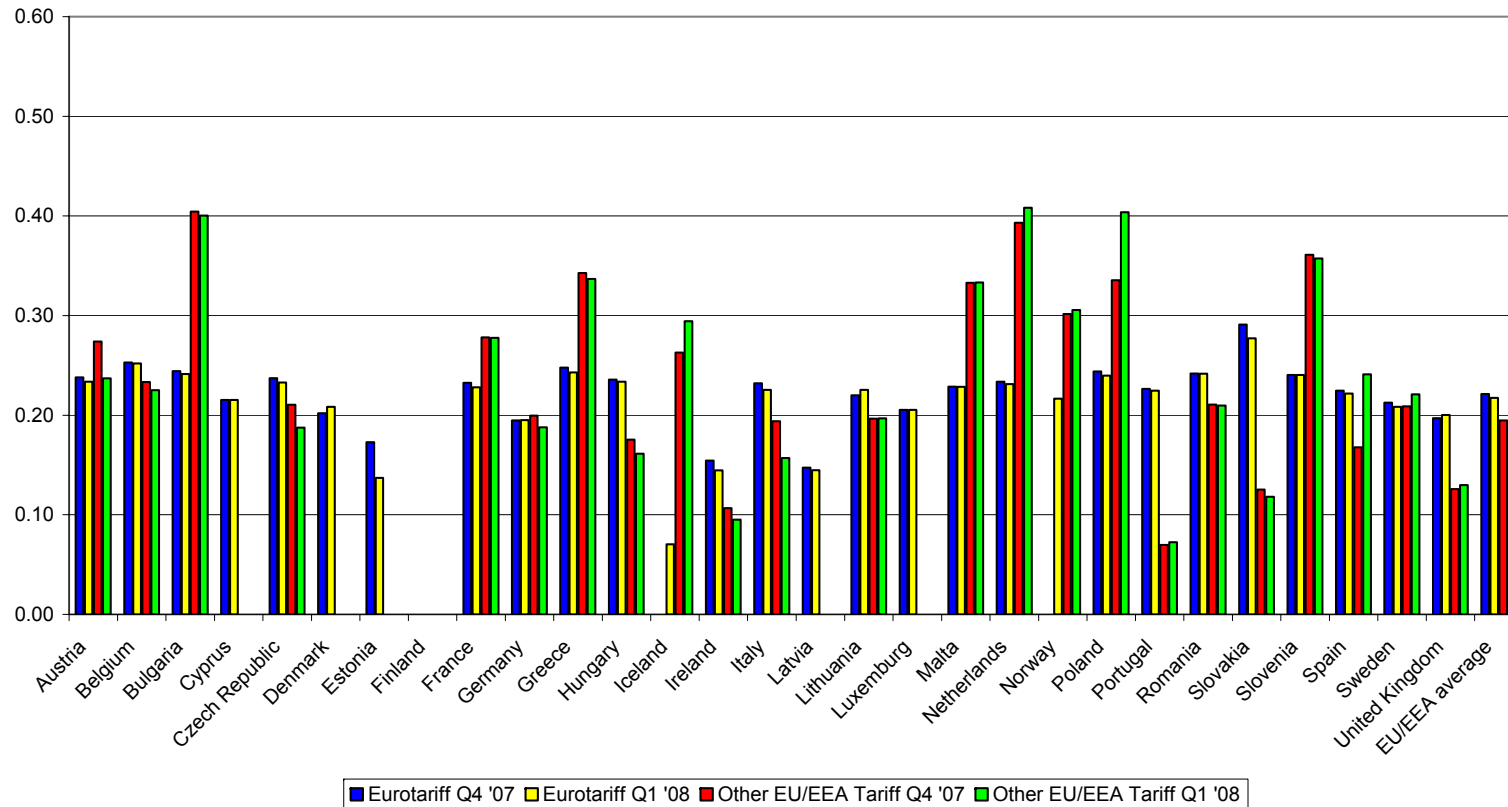
Figure 1: Average retail price per minute voice call made for pre-pay and post-pay consumers: Eurotariff and other EU/EEA tariffs (based on billed minutes)



EU/EEA average: Eurotariff Q4 2007 = 0.456€; Eurotariff Q1 2008 = 0.449€; Other EU/EEA tariffs Q4 2007 = 0.465€; Other EU/EEA tariffs Q1 2008 = 0.428€.

Figure 1 indicates that for calls made, on average the Eurotariff was below the regulated tariff of 0.49€. The chart also shows that the average price for alternative EU/EEA tariffs is at a similar level, although there is considerable variation by country. ERG is considering further the reasons for this.

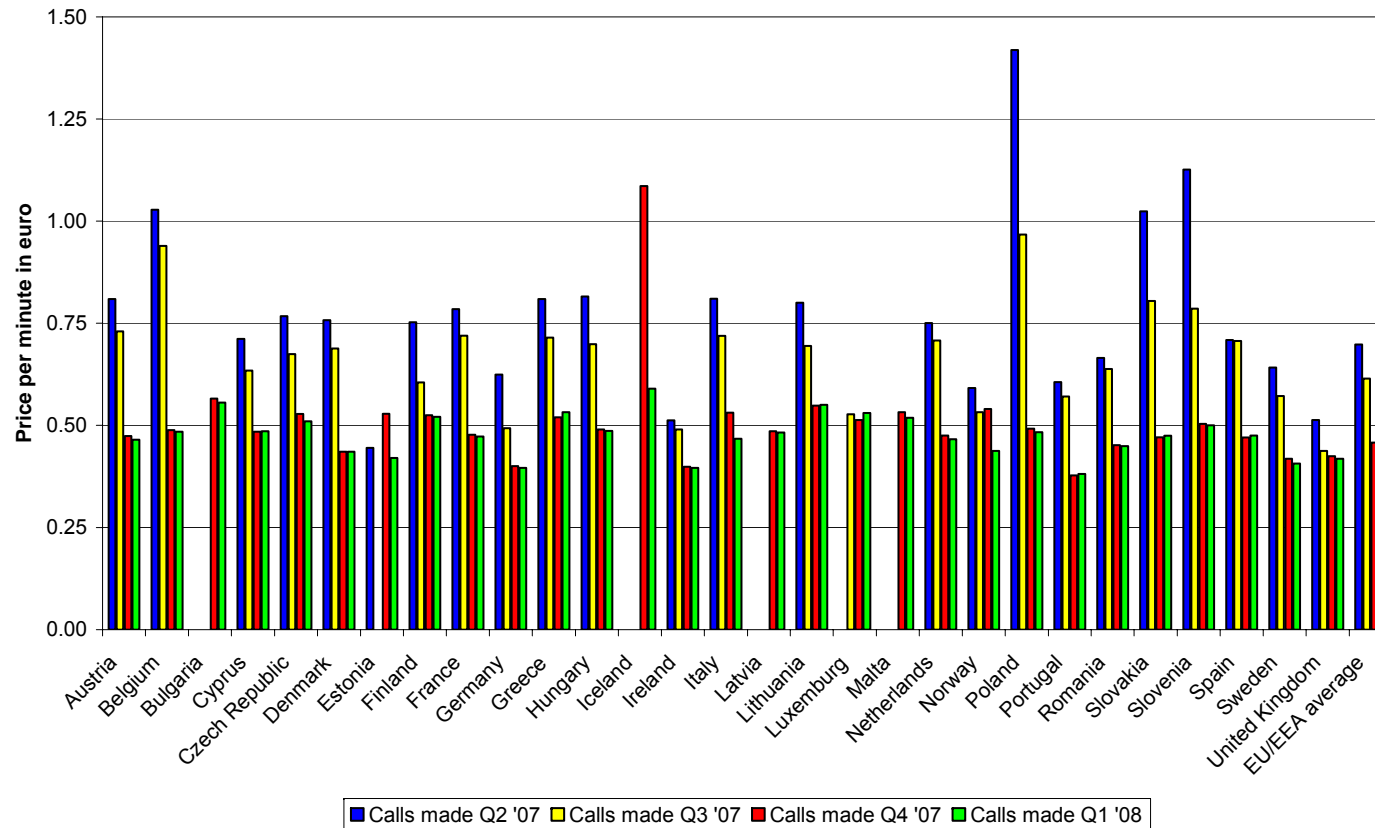
Figure 2: Average retail price per minute voice call received for pre-pay and post-pay consumers: Eurotariff and other EU/EEA tariffs (based on billed minutes)



EU/EEA average: Eurotariff Q4 2007 = 0.221€; Eurotariff Q1 2008 = 0.217€; Other EU/EEA tariffs Q4 2007 = 0.195€; Other EU/EEA tariffs Q1 2008 = 0.183€.

Figure 2 indicates that for calls received, on average the Eurotariff was below the regulated tariff of € 0.24. The chart also shows that the average price for alternative EU/EEA tariffs is at a slightly lower level, although there is considerable variation by country. ERG is considering further the reasons for this. See Section 4 for some examples.

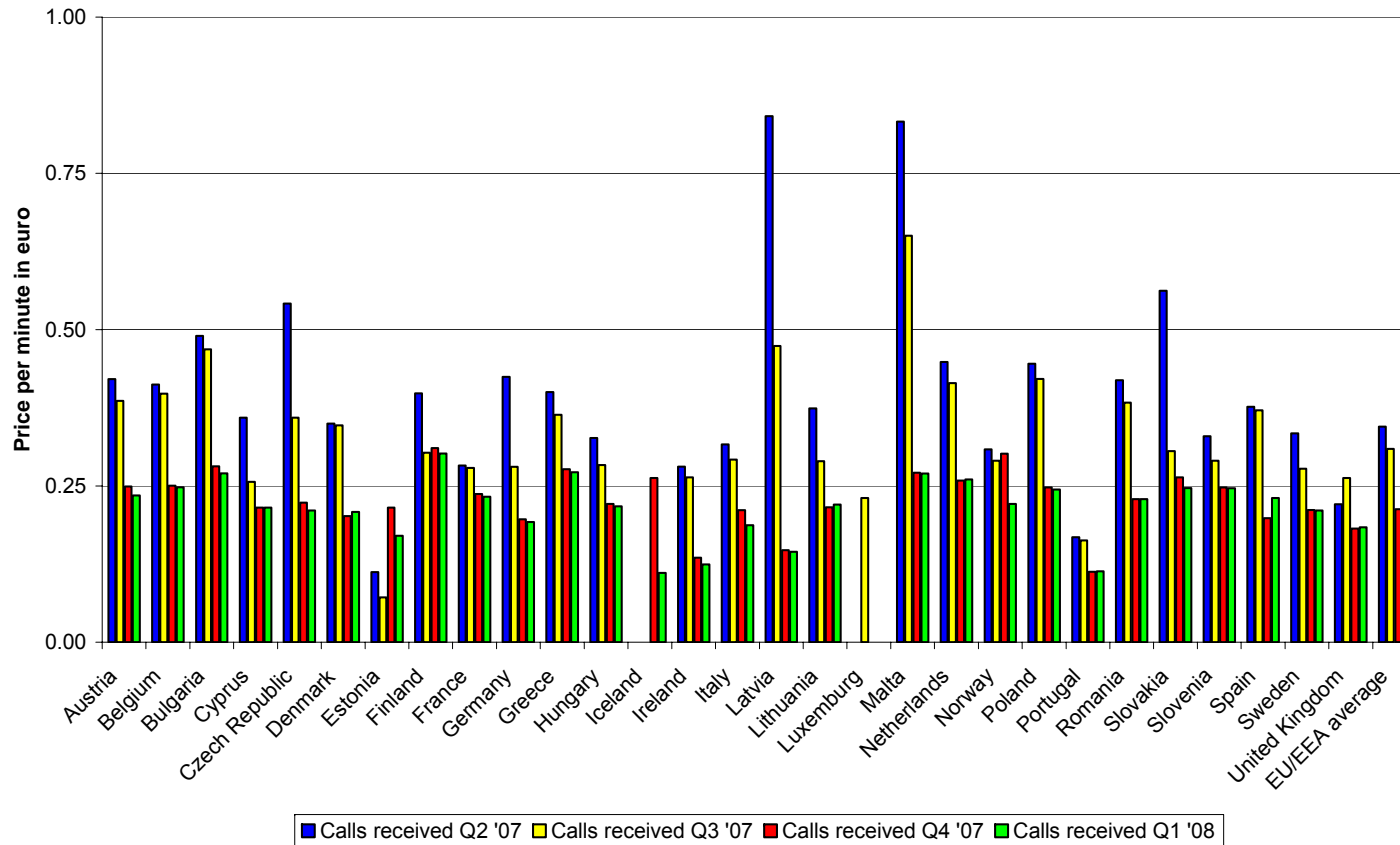
Figure 3: Average retail price per minute voice call made for pre-pay and post-pay consumers: average of Eurotariff and other EU/EEA tariffs (based on billed minutes)



EU/EEA average: Q2 2007 = 0.698€; Q3 2007 = 0.614€; Q4 2007 = 0.458€; Q1 2008 = 0.444€.

Figure 3 shows that the average price for making voice calls within the EU (considering both the Eurotariff and other EU/EEA tariffs) has dropped significantly in all countries since the announcement and subsequent implementation of the Regulation.

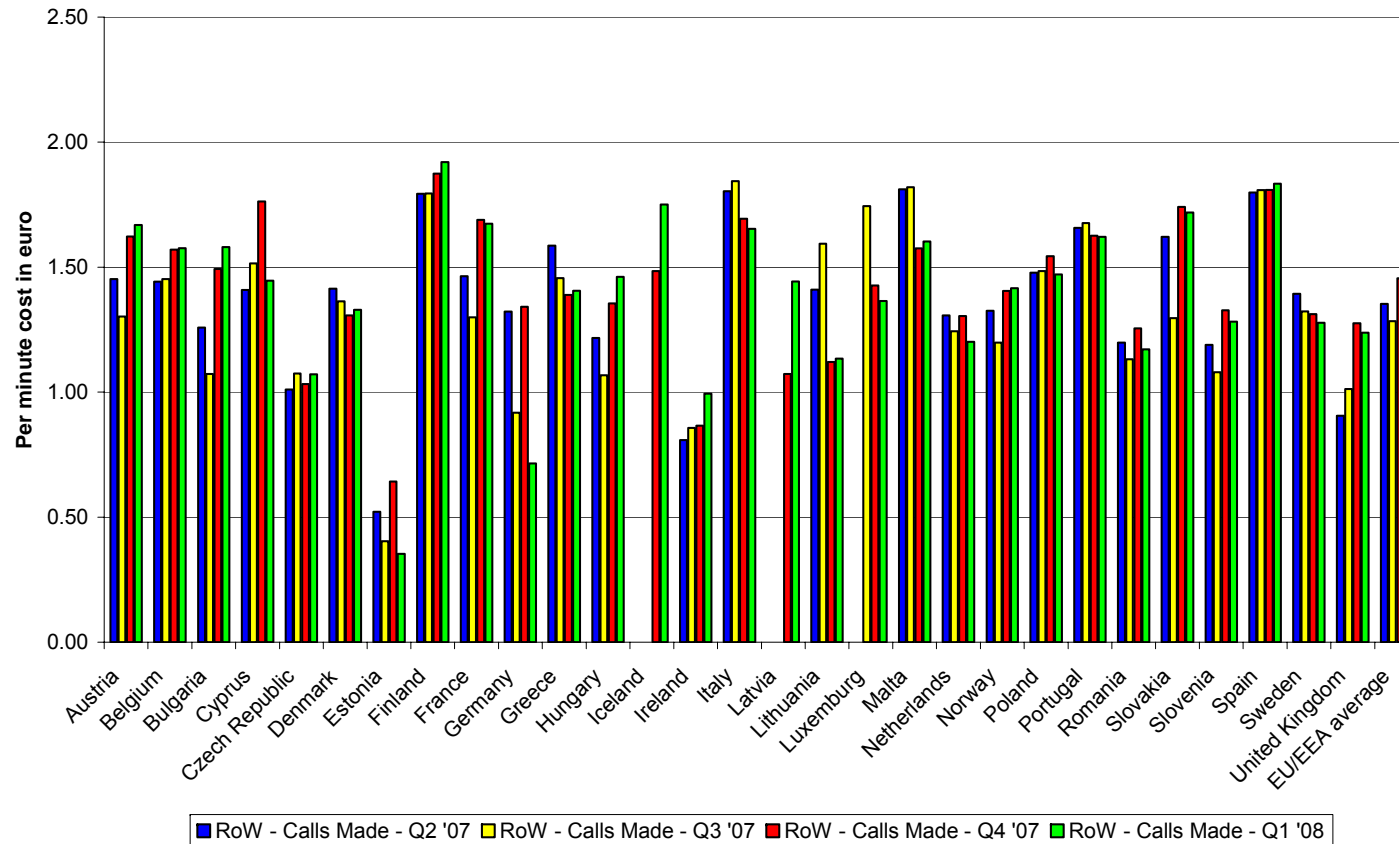
Figure 4: Average retail price per minute voice call received for pre-pay and post-pay consumers: average of Eurotariff and other EU/EEA tariffs (based on billed minutes)



EU/EEA average: Q2 2007 = 0.345€; Q3 2007 = 0.309€; Q4 2007 = 0.213€; Q1 2008 = 0.208€.

Figure 4 shows a similar picture to that of Figure 3, but for calls received. Here too the average price has dropped significantly in all countries since the announcement and subsequent implementation of the Regulation.

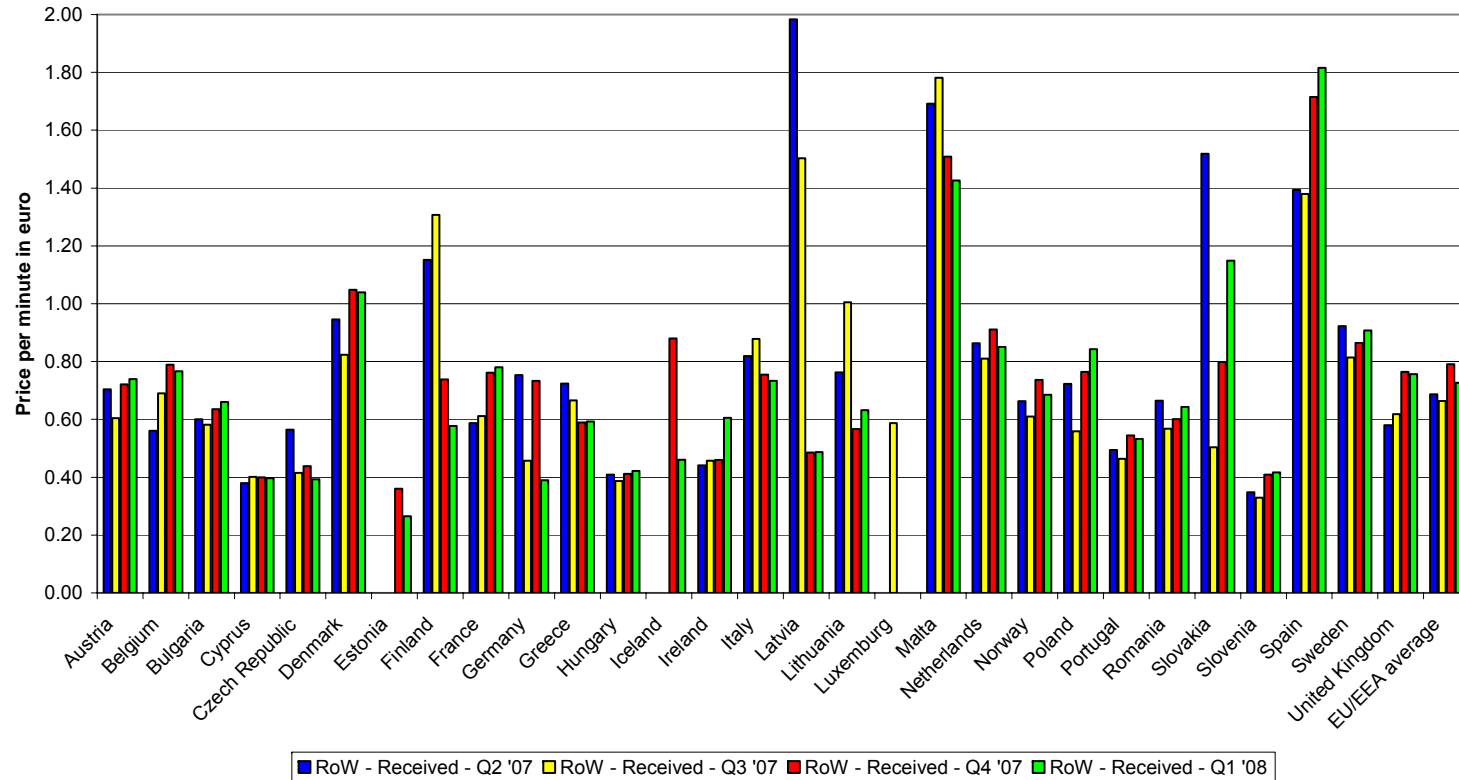
Figure 5: Average retail price per minute voice call made for pre-pay and post-pay consumers: Rest of World tariffs (based on billed minutes)



EU/EEA average: Q2 2007 = 1.353€; Q3 2007 = 1.284€; Q4 2007 = 1.455€; Q1 2008 = 1.319€.

Figure 5 gives an overview of developments in average prices for making calls from the EU/EEA to non-EU/EEA countries, from non-EU/EEA countries to the EU/EEA, or between non-EU/EEA countries. ERG considers fluctuations in average prices by country are likely to be due to seasonal effects.

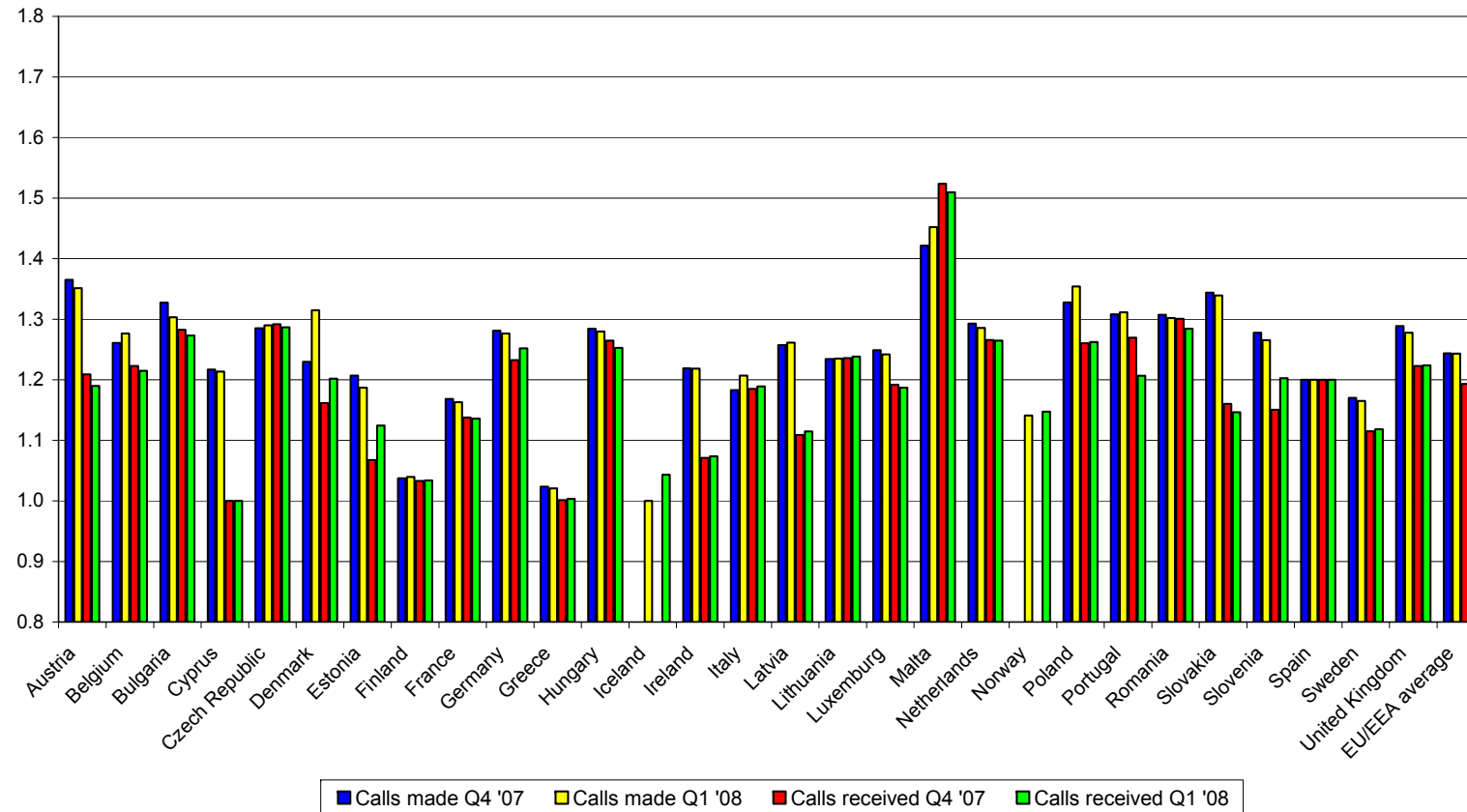
Figure 6: Average retail price per minute voice call received for pre-pay and post-pay consumers: Rest of World tariffs (based on billed minutes)



EU/EEA average: Q2 2007 = 0.687€; Q3 2007 = 0.664€; Q4 2007 = 0.791€; Q1 2008 = 0.726€.

Figure 6 shows a similar picture to Figure 5, but for calls received in the EU/EEA and originating in non-EU/EEA countries, or calls received in non-EU/EEA countries and originating inside or outside the EU/EEA. Again, there is no obvious trend.

Figure 7: Ratio of actual to billed minutes for voice calls made and received for pre-pay and post-pay consumers: Eurotariff

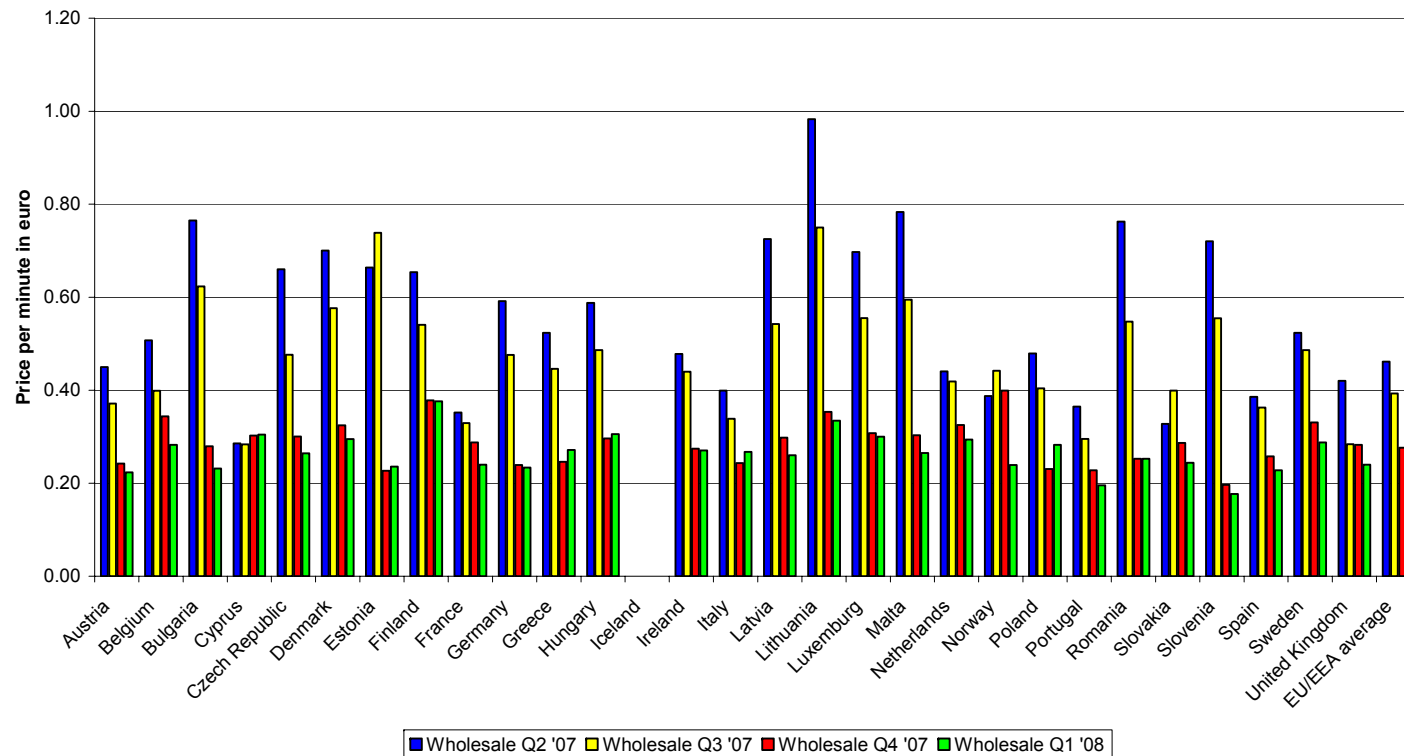


EU/EEA average ratio of actual to billed minutes: Calls made Q4 2007 = 1.243; Calls made Q1 2008 = 1.243; Calls received Q4 2007 = 1.193; Calls received Q1 2008 = 1.196.

Figure 7 illustrates the effects of billing unitisation, whereby the average price per minute calculated on the basis of actual length of call is higher than that calculated on the basis of billed length of call. The effect seems to be more pronounced for calls made than for calls received.

Wholesale voice

Figure 8: Average wholesale price per minute voice call: EU/EEA, non-group companies (based on billed minutes)

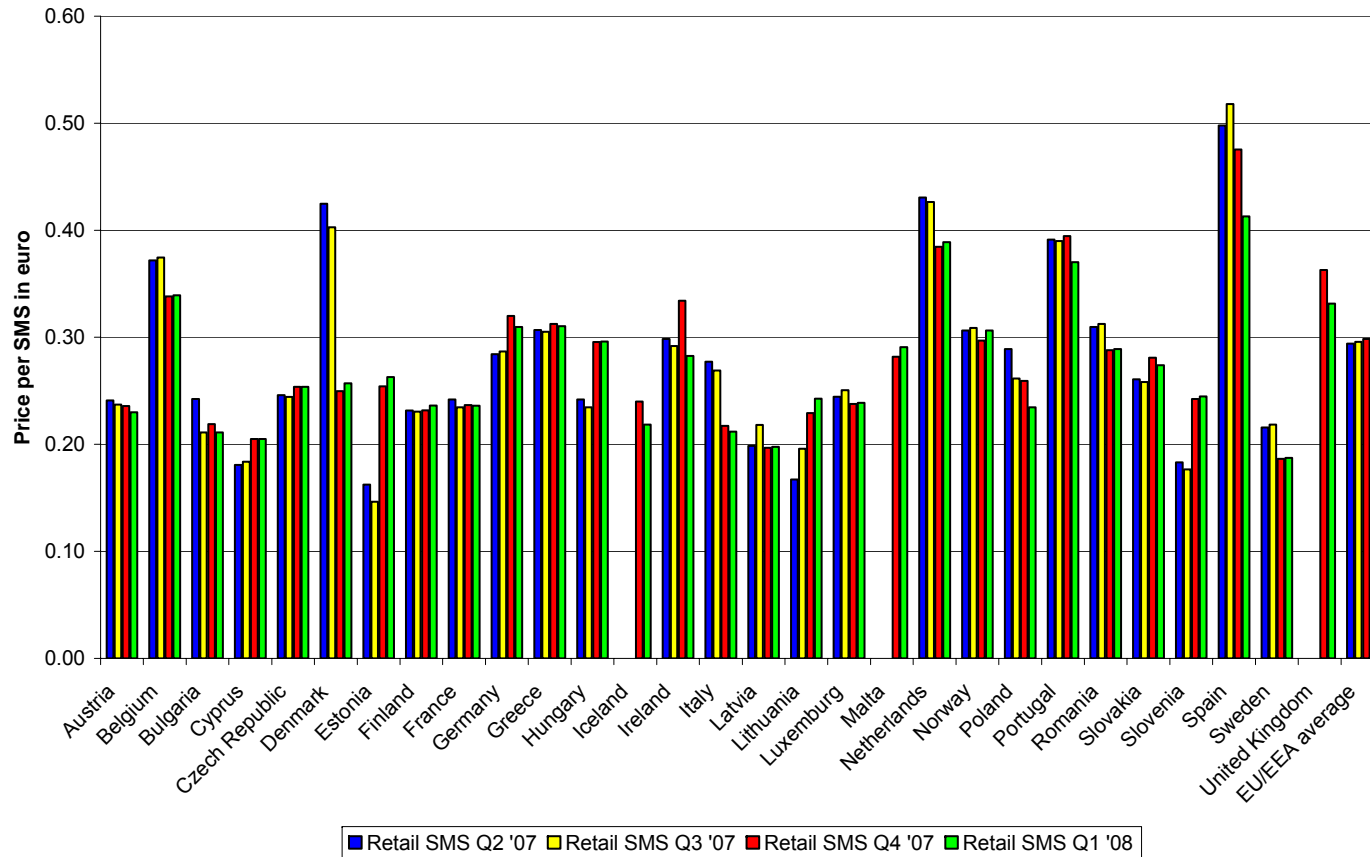


EU/EEA average: Q2 2007 = 0.462€; Q3 2007 = 0.393€; Q4 2007 = 0.276€; Q1 2008 = 0.249€.

Figure 8 illustrates average prices at the wholesale level. Although the first 12-month period starting in August 2007 for calculating compliance with the wholesale cap of 0.30€ is not yet complete, this figure suggests prices are compliant. The Regulation has had a significant impact, as the EU/EEA average has decreased by around 46% from Q2 2007 to Q1 2008, with bigger drops in some individual countries.

Retail SMS

Figure 9: Average retail price per SMS for pre-pay and post-pay consumers: EU/EEA

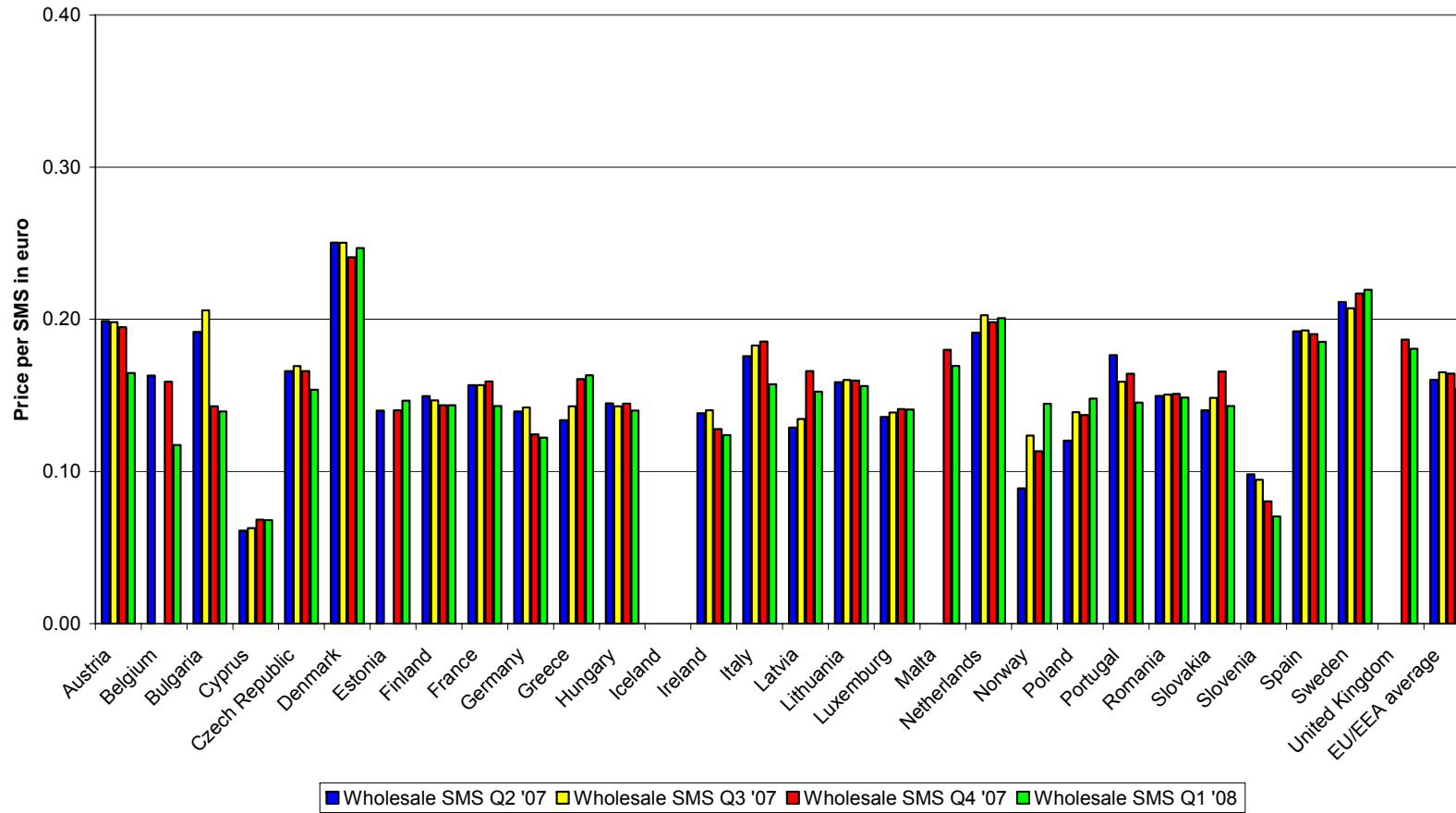


EU/EEA average: Q2 2007 = 0.294€; Q3 2007 = 0.296€; Q4 2007 = 0.298€; Q1 2008 = 0.285€.

Figure 9 gives an overview of the development in the average price for sending a SMS within the EU/EEA. The average price has remained relatively stable.

Wholesale SMS

Figure 10: Average wholesale price per SMS: EU/EEA, non-group companies

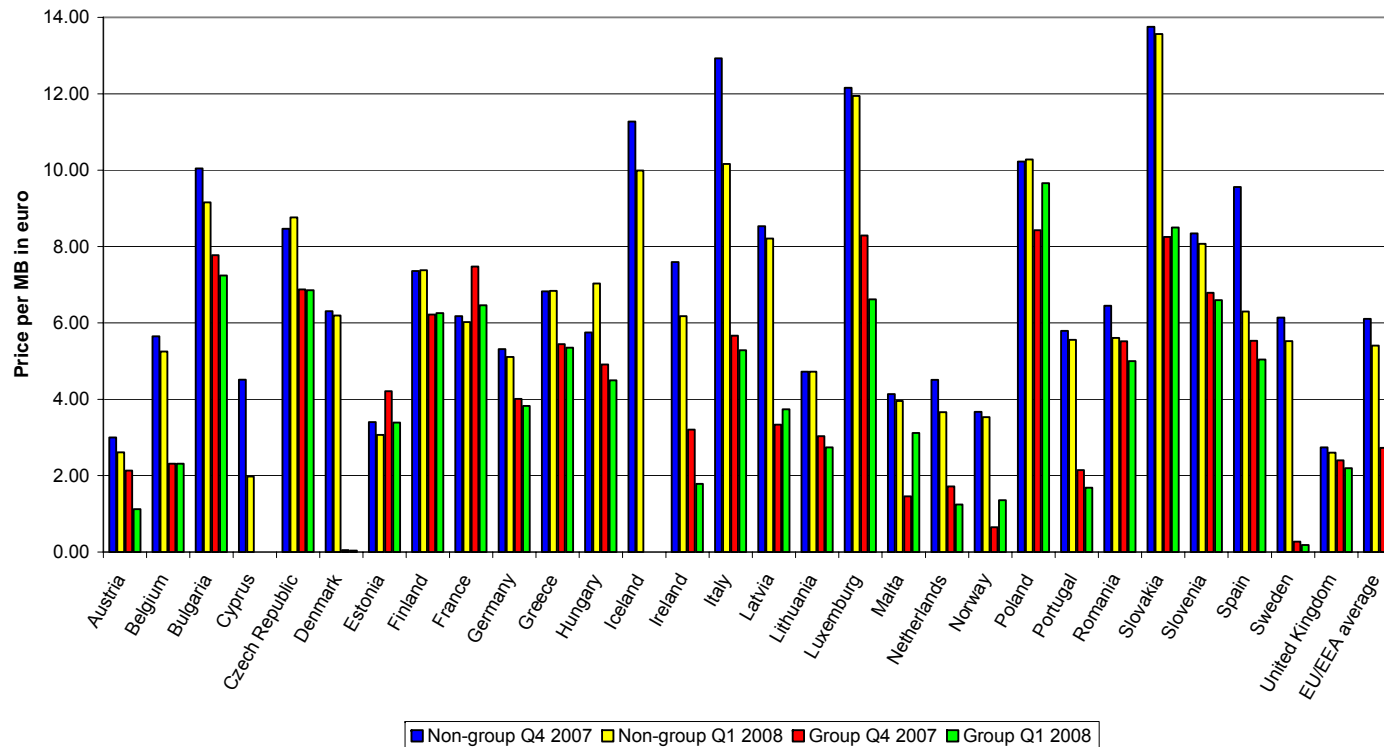


EU/EEA average: Q2 2007 = 0.160€; Q3 2007 = 0.165€; Q4 2007 = 0.164€; Q1 = 0.154€.

Figure 10 is similar to Figure 9, but at the wholesale level. Again, the average price has remained fairly constant.

Retail data

Figure 11: Average retail price per data MB for pre-pay and post-pay consumers: EU/EEA, group and non-group companies (based on billed megabytes)

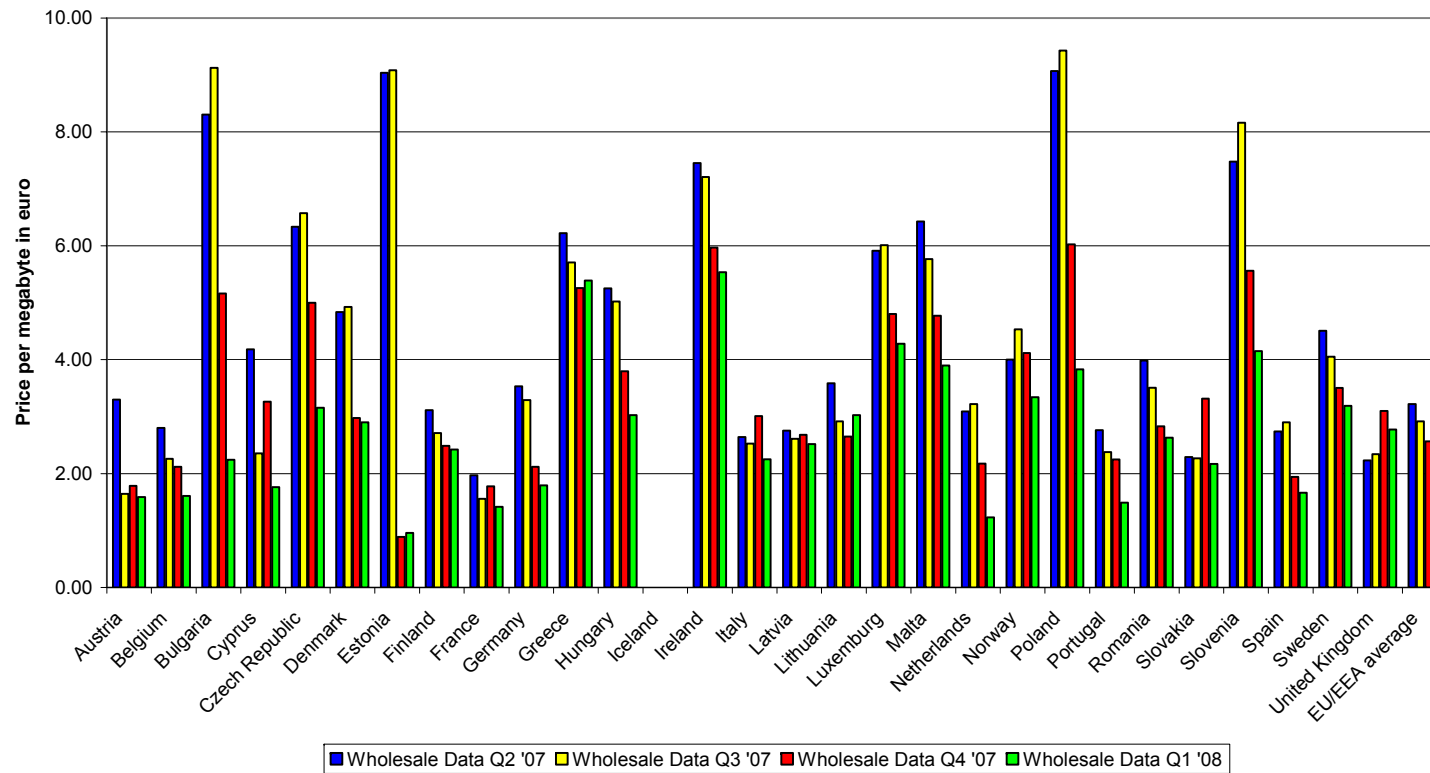


EU/EEA average: Non-group Q4 2007 = 6.106€; Non-group Q1 2008 = 5.408€; Group Q4 2007 = 2.731€; Group Q1 2008 = 2.055€.

Figure 11 gives an overview of the average retail price for roaming data services within the EU for both group and non-group prices. The graph shows a clear downward trend in both averages, but with large variations between countries. Group (i.e. "on-net") prices are generally much more favourable than non-group prices.

Wholesale data

Figure 12: Average wholesale price per data MB for inbound roaming: EU/ EEA, non-group companies (based on billed megabytes)



EU/EEA average: Q2 2007 = 3.220€; Q3 2007 = 2.916€; Q4 2007 = 2.561€; Q1 2008 = 2.004€.

Figure 12 illustrates an overall downward trend in the average price per MB for inbound data roaming services within the EU/EEA for non-group companies at the wholesale level, although significant variations between countries remain.

Transparency information

3.10 As part of the Regulation, all operators are required to satisfy certain transparency obligations. At present, all operators are able to meet the required criteria set out in the Regulation. All NRAs continue to monitor that the transparency obligations are met by the operators.

Additional information

3.11 In addition to the information above, ERG also gathered information in relation to Traffic Steering and Inadvertent Roaming, as required under Article 7 of the Regulation.

3.12 Traffic Steering is a technique used by mobile operators to steer traffic on to a preferred or partner network. There are a number of methods used to achieve this, but the result is that the consumer roams onto the foreign network of their home network's choice. Evidence suggests that this is used to provide a better or cheaper service to the roaming consumer.

Traffic steering

3.13 None of the providers that responded to the data collection stated that traffic steering was used to the disadvantage of consumers through higher charges. In general, such techniques were used to offer consumers a better deal, through either lower retail prices or enhanced services, or both.

Inadvertent roaming

3.14 Inadvertent roaming can occur near international borders. When a consumer is close to a border it is possible that they will pick-up a foreign mobile operator's network signal even if they are not actually located in the country of the foreign operator. In such cases, the consumer may be charged as if they were internationally roaming when in fact they are still in their home country.

3.15 The issue of inadvertent roaming was recognised by the majority of respondents to the data collection. In general however, this was not identified as a big problem with relatively few consumers adversely affected.

3.16 Many providers have adopted a number of mechanisms to deal with inadvertent roaming. Information was generally available on provider websites, and where a particular issue was identified, (for example between Northern Ireland and the Republic of Ireland) providers took additional steps to ensure consumers were aware of the issue, in some cases even offering bespoke tariffs.

3.17 The majority of providers also reported that where roaming genuinely occurs inadvertently, charges may be waived as a goodwill gesture.

Section 4

Further Issues

Implementation in EEA-only Member States

4.1 The Roaming Regulation entered into force in Norway, Iceland and Lichtenstein on 22 December 2007, meaning that in those countries, data for the regulated wholesale rate and the Eurotariff is available from quarter 1 2008 only. (Note that one operator in Norway introduced the Eurotariff during quarter 1, meaning that the 'other EU/EEA tariff' data for quarter 1 2008 also includes data from that operator (figure 1)).

Summary of data 'gaps' and apparently 'anomalous' results

4.2 This second round of data collection revealed that a limited number of operators still had some problems supplying reasonable quality data. This is not at all unusual for a comprehensive data collection of this type. In many cases the NRA was able to work with the company to resolve or alleviate the problem. In others cases, where system upgrades will be necessary to comply with the data collection, the company was asked to provide the best possible estimate available currently and to complete the upgrades in time to provide high quality data for the next collection.

Actual/billed minutes

4.3 Although NRAs have put pressure on their operators to supply the figures for actual and billed minutes for voice roaming services, a small number of operators still had problems supplying the requested data. Overall, ERG feels the differences between actual and billed minutes indicated by this Report are a fair reflection of actual practices.

Special retail offers

4.4 In some cases, an apparently low price reflects a special tariff. For example, there is an 'other EU/EEA tariff' for roaming voice calls received of 0.80€ for 10 minutes, leading to low figures for Portugal in figure 2.

4.5 For retail data roaming (figure 11), Denmark and Sweden have apparently low average figures for group prices in quarter 4 2007 and quarter 1 2008. Those averages are not representative of all Danish and Swedish operators, but rather due to one MNO's flat-rate domestic subscriptions, which include unlimited international data roaming on selected partner networks in the monthly subscription fee, and which have lead to high volumes without roaming-specific revenue.

Wholesale discounts

4.6 At the wholesale level, operators often receive discounts based on variables like volume of traffic, calculated at the end of a 12-month period. When providing data for these Reports, operators may estimate the effect of such discounts on data for each quarter. Because the actual discount may vary from the estimation, there may be an apparently 'anomalous' result for the quarter when the discount is actually applied. This should be borne in mind when comparing wholesale figures for different quarters in the same year. For example, this has caused an apparent rise in the average wholesale SMS price for Norway between quarter 4 2007 and quarter 1 2008 (figure 10).

Varying response rate

4.7 A further issue that may cause an apparent change in price between quarters, when tariffs have remained the same, is a variance in the operators that provide reliable data for a particular data category in each quarter. For example, one Finnish operator was unable to provide reasonably reliable data for retail price for rest of world voice calls for quarter 1 2008 (figures 5 and 6), suggesting a change in the average price. There was also a change in the UK operators that provided reliable data on wholesale data roaming prices in quarter 4 2007 and quarter 1 2008 (figure 12).

Overview of compliance issues

4.8 As stated elsewhere in this report, overall compliance with the provisions of the Regulation has been very good. All mobile operators offer their consumers a Eurotariff, compliant with the rates set down in Article 4 of the Regulation, wholesale rates appear to have fallen in line with the requirements set out in Article 3 of the Regulation, and consumer transparency has improved.

Future data collection

4.9 ERG intends to continue to collect data on a 6 monthly basis, with data split by quarter. The next period for data collection will therefore be from 1 April 2008 to 30 September 2008. ERG expects to report on this data early next year.

Annex 1

List of respondents

Below are the operators that provided data for the period 1 October 2007 – 31 March 2008.

Austria

Dialog Telekom
eTel Austria
Hutchison 3G Austria
Mobilkom Austria
ONE
Tele2 Austria
T-Mobile Austria
Yesss!

Belgium

Belgacom Mobile
Mobistar
One Base

Bulgaria

Cosmo Bulgaria Mobile
Mobitel EAD
BTC Mobile EOOD

Cyprus

Cytamobile-Vodafone
EAD MTN Cyprus (Areeba Ltd)

Czech Republic

Telefónica O2 Czech Republic
T-Mobile Czech Republic
Vodafone Czech Republic

Denmark

Hi3G
TDC
TeliaSonera
Sonofon

Estonia

Elisa Eesti AS
AS EMT
TELE 2 Eesti AS
ProGroup Holding OÜ
OÜ Top Connect

Finland

TeliaSonera Finland Oyj
DNA Networks Ltd
Elisa Corporation
Alands Mobiltelefon Ab

France

Auchan mobile
Bouygues Telecom
Coriolis
Debitel
Digicel AFG
Mobisud
Orange Caraïbe
Orange France
Orange Réunion
SFR
SRR
Ten
Transatel
Virgin

Germany

T-Mobile Deutschland GmbH
Vodafone D2 GmbH
E-Plus Mobilfunk GmbH & Co. KG
O2 Germany GmbH & Co. OHG

Greece

COSMOTE Mobile Telecommunications
S.A.
Vodafone Panafon S.A.
Wind Hellas Telecommunications S.A.

Hungary

T-Mobile
Pannon GSM Távközlési Zrt
Vodafone Magyarország Zrt

Iceland

Síminn hf.
Vodafone Iceland

Ireland

Hutchison 3G Ireland
Meteor Mobile Communications
O2 Communications Ireland
Vodafone Ireland
Eircom Mobile
Tesco Mobile

Italy

Telecom Italia
Vodafone Omnitel
Wind Telecomunicazioni
H3G Italia
Coop Voce
Carrefour Italia Mobile

Latvia

Bite Latvia
Tele2
Latvijas Mobilais Telefons

Lithuania

UAB Omnitel
UAB Bitė Lietuva
UAB Tele2
UAB Eurocom

Malta

Vodafone Malta Ltd
Mobisle Communications Ltd (GO Mobile)

Netherlands

AH Mobiel
Debitel Nederland B.V.
KPN B.V.
Orange Nederland N.V.
Ortel Mobile B.V.
Qick - MRGQ B.V.
Tele2 Netherlands B.V.
T-Mobile Netherlands B.V.
UPC Nederland Mobile B.V.
Vodafone Libertel B.V.

Norway

Telenor
NetCom
OneCall
Tele2
Chess
Ventelo
Network Norway

Lebara
Talkmore
Telenordic
Telio
ACN Norge
TDC
Lyse
Newphone

Portugal

Sonaecom - Serviços de Comunicações, SA
Vodafone Portugal - Comunicações Pessoais, SA
TMN - Telecomunicações Móveis Nacionais, SA
CTT- Correios de Portugal, SA (Phone-ix) (this MVNO did not contribute to the first Report because it started operations in November 2007)

Romania

Orange Romania
Vodafone Romania
Cosmote Romanian Mobile
Telecommunications

Slovak Republic

Telefónica O2 Slovakia
T-Mobile Slovensko
Orange Slovensko

Slovenia

Mobitel
Simobil
Debitel
Izimobil
Tušmobil

Spain

Telefonica Moviles de España
Vodafone
Orange
Yoigo
Euskaltel

Sweden

Telenor Sverige AB
TeliaSonera AB
Tele2 Sverige AB

Spring Mobil AB
Ventelo Sverige AB
Hi3G Access AB

UK

O2 UK
Vodafone UK
Orange UK
T-Mobile UK
3 UK
Tesco Mobile
Carphone Warehouse
Virgin Mobile
BT Mobile