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GSMA Europe response to the

Draft Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU

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GSMA Europe response to the Draft Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU

GSMA Europe (GSMA) welcomes the opportunity to comment on the European Commission's draft Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU.

The appropriate regulation of termination rates needs to be determined taking into account the diversity of European mobile markets. Significant variation exists in terms of market size, the types of mobile services consumed, as well as underlying demand and supply factors, including income and cost levels and the competitive alternatives available. There are also large differences between operators within individual national markets, in terms of absolute and relative subscriber numbers, composition of their subscriber-bases, average revenues per user, dates of market entry, membership of an international operator group, ownership relationships with fixed operators, take-up of 3G services and the current levels at which their terminated charges are regulated.

The differences in market and operators' circumstances mean that changes in termination charges will not affect operators in the same way. For example, some operators are net acquirers of termination minutes from other operators, while others are net providers. Some operators regard the current level of termination charges to be critical to the provision of ubiquitous mobile services, especially to low-spend users. Others consider that current termination charge levels are creating a barrier to their growth. Operators' views are also heavily shaped by their expectations in relation to the overall market impact of the proposals as their own success is determined by the health of individual national markets.

The diversity in circumstances and expectations over the potential impacts of the proposals means that European mobile operators do not share a single view of the appropriate level and structure of termination charge controls, even though all operators regard the regulation of termination as a critical issue.

The main aim of this response is to set out the GSMA's position in relation to three key areas on which there is agreement among operators: the importance of EU harmonisation in relation to both costing principles and the way in which those principles are implemented at a national level; the need for thorough analysis of the likely impact of the proposals; and the recognition that harmonised principles will nonetheless lead to different charge levels between fixed and mobile technologies and between different Member States.



Main conclusions

- GSMA welcomes greater harmonisation of the approach to termination regulation across the EU. The Commission can help reduce uncertainty over future regulatory arrangements and potential distortions by setting out a common set of costing principles and identifying best practice to be followed by national regulators.
- A key principle is that the regulation should not prevent operators from recovering their efficiently incurred costs. This principle is important to ensure that operators have the incentive to continue to invest in the development of their networks and in the deployment of new services. Applying Long Run Average Incremental Cost (LRAIC) methodologies will help ensure that efficiently incurred costs are recovered.
- The regulation of termination services should also reflect the levels of efficient costs incurred in supplying mobile services in each specific Member State. In particular, applying a common set of principles should not be expected to lead to one termination rate for telecoms services across Europe, given differences in costs and demand conditions. While the current range of termination charges between Member States are being reduced, it will be efficient for some differences to remain in line with the underlying supply conditions prevailing in each Member State. Some operators believe that other factors (for example, traffic imbalances and network externalities) should also be taken into account when setting termination rates in particular markets.
- Major differences exist between fixed and mobile networks. In regard to termination, the traffic-related costs of supplying mobile services are significantly higher than the traffic-related costs of fixed services. Efficient termination rates will therefore differ between fixed and mobile networks.
- The Commission is proposing a major change in relation to the costs that will be allowed to be recovered in termination charges. In particular, the draft Recommendation proposes that termination charges be capped at the level of variable costs and that termination should not contribute to certain specified fixed and common costs. Termination charges will be substantially reduced as a result. All operators believe that these proposals would significantly affect the European mobile industry and European consumer outcomes. There are however major differences in opinion amongst operators regarding what these effects will be and whether they will promote or harm overall consumer welfare. The majority of operators anticipate a decrease in consumer welfare.



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- A thorough impact assessment should be undertaken, prior to implementing any significant change. Ultimately, regulation should be consistent with the general objectives of the European regulatory framework, including promoting overall consumer benefits, competition and investment and ensuring that operators are not prevented from recovering their efficiently incurred costs. The impact assessment should also examine how the effects will vary across national markets, customer segments (e.g. prepaid vs. postpaid) and different socio-economic groups. The levels of termination charge controls and the appropriate glidepaths should be determined so that they are appropriate to each Member State.
- In addition to the actual cost principles, the way in which those principles are applied by regulators is also important – good principles applied poorly may still carry large costs. The Commission and the ERG can play a significant role in establishing common ‘best practice’ processes, and ensuring these are applied consistently by national regulators. Key elements of best practice include: ensuring transparent processes in which decisions are made on the basis of consultation with industry and customers; reconciling model assumptions and results with actual data relevant to the market; undertaking a thorough assessment of the impact of particular options so as to identify the approach that will bring the greatest net benefits; and clearly setting out the reasons for the approach that is adopted.
- GSMA wishes to contribute positively to the development of a harmonised European approach to the regulation of mobile termination charges and is willing to assist the Commission further in developing its understanding of the likely impacts of its proposal.



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1. The European mobile industry encompasses a wide range of markets and operators

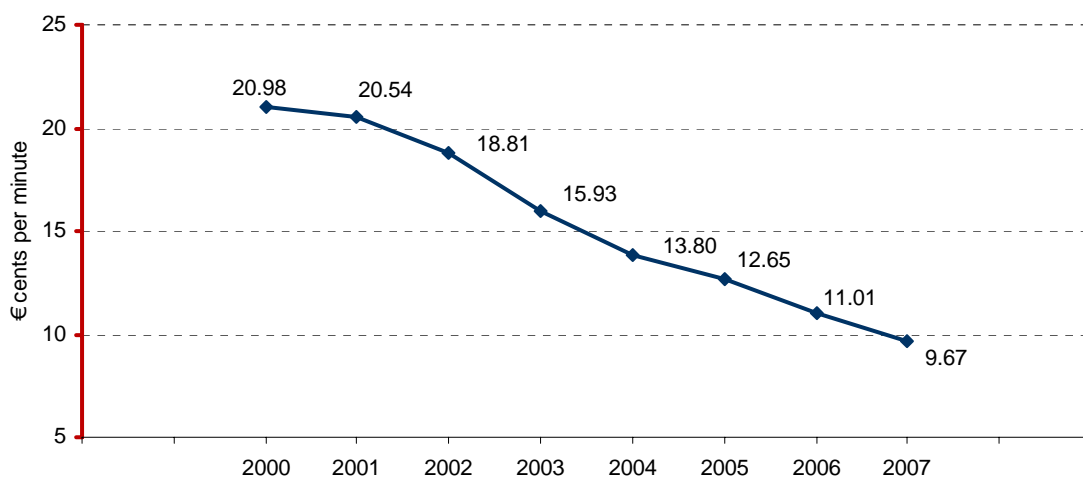
This Section sets out key features of European mobile markets, relevant for understanding the impact of termination regulation and hence for determining the best regulatory approach.

Today, mobile services are ubiquitously available in Europe. Some 400 million Europeans (80% of the population) have access to mobile services with the affordability of mobile services resulting in increasing numbers of low income households relying only on mobile services for their access to telecommunications.

Competition in the mobile markets across Europe is intense, with three or more operators in most Member States, as well as a large number of MVNOs present.

Termination rates in the EU have been falling steadily under the current regulatory approach, and current regulation that is in place will continue to reduce termination rates over time.

Figure 1: EU average interconnection charges for call termination on mobile networks



Source: European Commission, 6th, 9th, 11th and 13th Implementation Reports

Mobile markets in Europe are highly diverse

At the most fundamental level, Member States in the EU are at varying stages of economic development and this impacts customer demand and supply conditions. For example, the average income level in Bulgaria is only 40% of the EU average, while average income in Ireland is 50% above the average level.¹ Member States also differ in terms of their existing telecommunications infrastructure such as in terms of the roll-out of fixed, cable and mobile networks.

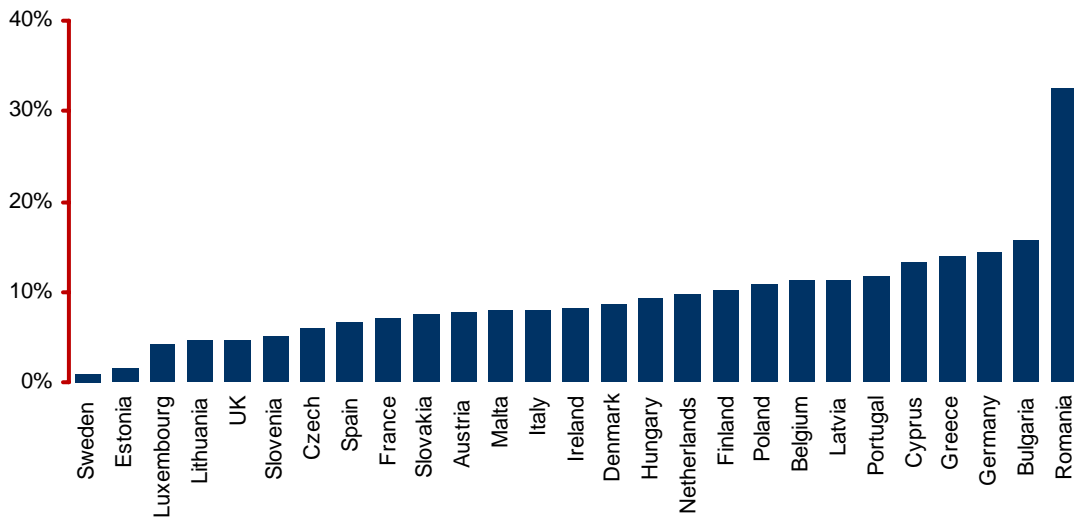
¹ Eurostat, 'GDP per capita in PPS - GDP per capita in Purchasing Power Standards (PPS) (EU-27 = 100)', accessed 7 August 2008



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Reflecting the differences in wealth and economic development, customer take-up of mobile services and in the structure of national markets varies across the EU. Poorer member states that are earlier in their market development tend to have lower penetration but higher growth rates. The two newest Member States recorded the most rapid growth in 2007.

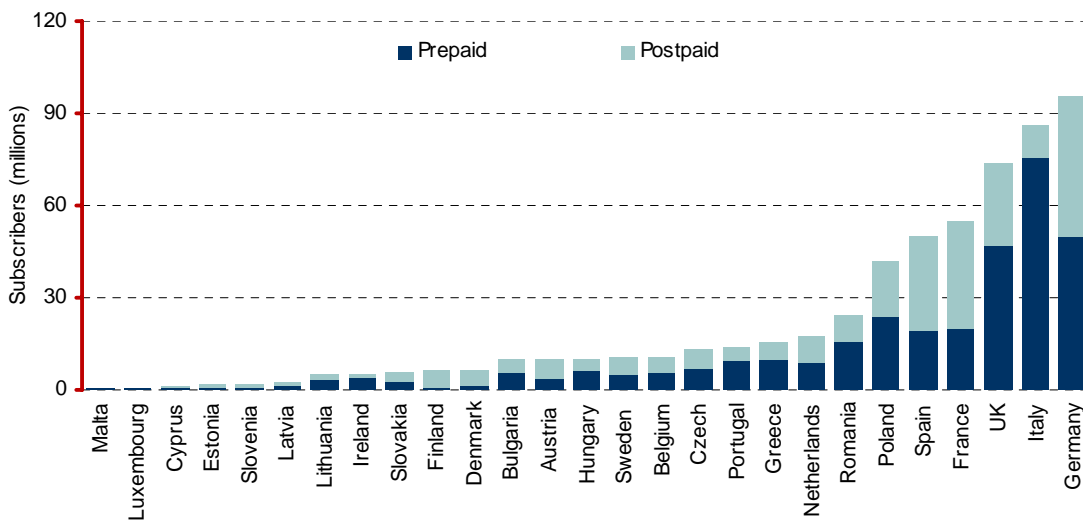
Figure 2: Subscriber growth in 2007



Source: Informa, World Cellular Information Service

The size of individual mobile markets also varies significantly. Germany has over 90 million mobile subscriptions while, at the other extreme, Malta has less than 0.4 million subscriptions. Figure 3 highlights not only the range in subscriber numbers but also the shares of prepaid and postpaid customers.

Figure 3: Number of mobile subscribers, Q1 2008



Source: Informa, World Cellular Information Service



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While the majority of European customers have chosen to be on prepaid tariffs, this is not the case in all Member States. In particular, most customers in Austria, Denmark, Finland, France, Slovenia and Spain use postpaid tariffs. These differences are important when considering termination regulation, given that the prepaid business model (in which there are no guaranteed revenues from customers) relies more heavily on termination revenues. Prepaid customers are also more likely to receive more calls than they make.

The Commission refers to wider international comparisons of consumer outcomes in its working note. GSMA notes that drawing firm conclusions from international comparisons is difficult. Data are often not directly comparable and differences in the development of national markets and customer demand mean that it is not possible to draw conclusions from simplistic analysis.

Ultimately, the regulatory approach should be sufficiently flexible so as to be proportionate to all Member States and their individual circumstances.

Costs of supplying mobile services varies across the EU

The unit costs of supplying mobile services can vary significantly between countries reflecting the impact of factors such as:

- subscriber densities (the unit cost of supplying services will generally be higher in lower density areas as there is less traffic over which to recover the cost of the network);
- traffic volumes (higher volumes can bring scale economies in terms of the recovery of fixed costs as well as discounts on purchases of equipment and handsets);
- terrain (mountainous terrain or densely built-up areas may require more cell-sites to ensure adequate signal coverage across the area compared with a flat, open landscape);
- land, labour and capital costs (there can be significant differences between countries in the cost of land and labour and the cost of capital – Purchasing Power Parity figures provide an indication of differences in general cost levels between countries); and
- spectrum assignments (the amount and nature of an operator's spectrum assignment is a significant determinant of the cost of supplying mobile services, as is the costs of the rights to that spectrum).

As a result of the differences in supply conditions, cost based mobile termination rates will not lead to one pan-European termination rate. Indeed, a single European rate would not be cost based and would create significant inefficiencies.

Table 1 highlights the extent to which cost drivers (or proxies for the cost drivers) can vary across Member States.



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Table 1: Mobile network cost drivers across the European Union

		Population Density (2007)	Mobile Paired Spectrum Assignments	General Price Levels (2005)	Labour Costs (2005)*	Corporate Tax Rate	Total Minutes (2007)***
		<i>(pop per km²)</i>	<i>(MHz)</i>	<i>(US=100)</i>	<i>(EUR)</i>	<i>(%)</i>	<i>(billions)</i>
1	Austria	101	155.4	109	3,767	25%	23.2
2	Belgium	350	127	112	3,938	..	19.5
3	Bulgaria	69	74.1	38	229	15%	8.5
4	Cyprus	84	..	91	2,028	10%	n/a
5	Czech Republic	133	132.2	60	954	24%	18.5
6	Denmark	128	159.6	142	4,360	28%	14.1
7	Estonia	31	117	62	713	23%	4.2
8	Finland	17	135.8	122	3,614	26%	23.7
9	France	116	159.8	115	4,296	33%	163.9
10	Germany	236	140	111	3,786	25%	119.1
11	Greece	85	45**	87	..	29%	29.4
12	Hungary	109	83.6**	64	944	10%/16%	21.8
13	Ireland	63	122.4	127	..	13%	14.2
14	Italy	201	134	109	..	33%	149.4
15	Latvia	36	115	53	433	15%	2.1
16	Lithuania	52	..	53	556	15%	6.5
17	Luxembourg	184	121.2	115	4,498	30%	n/a
18	Malta	1,291	112.6	72	1,386	35%	n/a
19	Netherlands	483	155.8	112	3,974	30%	33.2
20	Poland	125	..	59	818	19%	47.9
21	Portugal	115	101.8	88	1,557	25%	20.4
22	Romania	94	92	49	358	16%	38.7
23	Slovakia	111	..	55	701	19%	9.6
24	Slovenia	100	..	76	1,605	25%	2.9
25	Spain	89	155	95	2,135	35%	98.2
26	Sweden	22	156.6	124	4,432	28%	24.2
27	United Kingdom	252	156.4	118	4,071	30%	164.0

Notes and sources: * Average monthly labour costs, defined as total labour costs per month divided by the corresponding number of employees, expressed as full-time units, in Euros. ** Does not include 3G spectrum. *** Total minutes for some countries are best estimates, based on available operator data, Eurostat and National regulator reports. Population Density: CIA, *World Factbook*; Eurostat, Population Data (26 August). Spectrum Assignments: <http://www.ero.dk/umts> and <http://www.ero.dk/gsm>. General Price Levels: World Bank, *2005 International Comparison Program* (Feb 2008). Labour Costs: Eurostat, Labour Cost Data (26 August). Corporate Tax Rate: GSMA, *Global Mobile Tax Review 2006-2007*.



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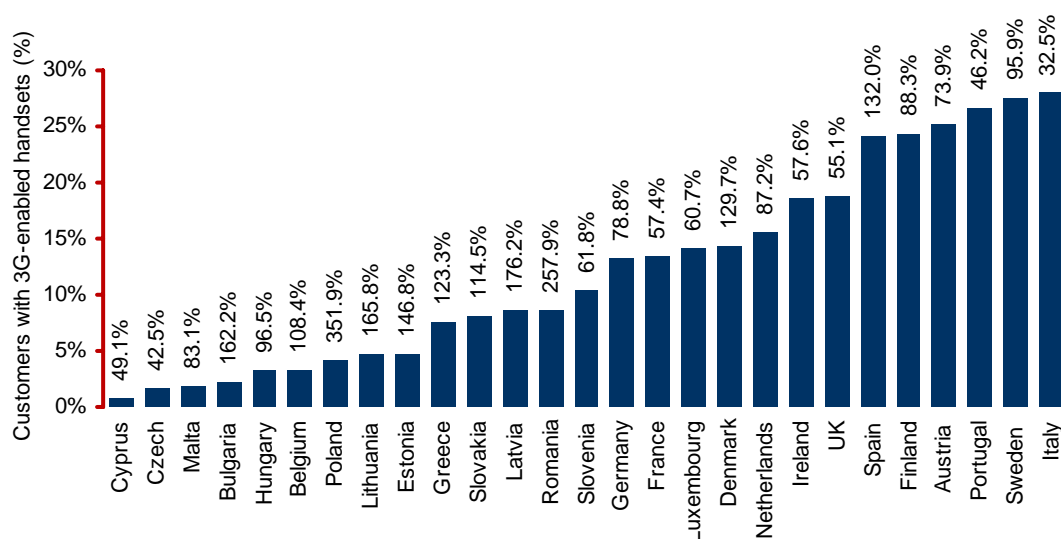
Mobile operators across Europe are highly diverse

The circumstances of individual mobile operators also vary significantly. Some operators are part of large international groups such as Orange, Telefonica/O2, T-Mobile and Vodafone, while others are based in only one Member State or operate regionally. The total size of an operator's European mobile customer base can vary from around 150 million for Vodafone to less than a million for the smaller operators. Some operators are mobile only while others are under common ownership with fixed operators, often a fixed incumbent operator. These factors impact scale and scope economies and impact operators' attitudes to the level of termination charges in their own country and in countries where large volumes of their calls terminate.

The experience of individual operators also differs in relation to their pattern of growth. The first cellular networks were built in the 1980s. These operators migrated to digital (GSM) in the early 1990s along with a number of new entrants. Further waves of entry came in the late 1990s, and then following the 3G auctions beginning in 2000. Some operators such as Xfera in Spain have entered as recently as December 2006. The early entrants have lost significant percentage market share over time to later entrants particularly those entering in the late 1990s, although their absolute subscriber numbers have generally increased significantly over time. More recent entrants have tended to experience much slower growth as they entered markets with a number of established operators.

Operators are also at various stages in the migration to mobile broadband services. Operators in Member States currently below the EU average for 3G penetration, tend to have higher rates of growth in 3G subscribers, suggesting the potential for catch-up over time.

Figure 4: Share of customers on 3G and 3G subscriber growth, 2007



Notes and Source: Columns show the percentage of mobile customers in each Member State that have 3G-enabled handsets. The percentage figure presented above each column shows the annual growth in 3G subscribers for 2007. Informa, World Cellular Information Service



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Operators have pursued a range of business strategies tailored to the national markets that they have entered and reflecting the nature of their entry relative to other operators in the markets. Operators' strategies are also based on their own views on the potential effects of future (and highly uncertain) market changes and how best to deal with those changes.

Conclusion

The EU comprises a range of mobile markets at various stages of development and with a variety of demand and supply conditions. Growth remains strong in some markets, while it has slowed in others. Some markets are heavily prepaid focused while others have large shares of postpaid customers. The cost of supplying services is markedly different across the EU. The circumstances of operators within national markets also vary.

The Commission should seek harmonisation of costing principles across the EU. However, the application of those principles should have regard to the specific circumstances of each national market.

As the Commission recognises, termination rates currently vary significantly across Europe with the range of the rates likely to exceed that attributable to objective cost differences alone. Nonetheless it is important to recognise that the application of common regulatory principles, whilst taking into account individual market circumstances, will result in some differences in charge levels.

The varying circumstances of individual operators mean that they will not all be affected by changes in termination rates in the same way. We turn next to consider these impacts and their consequences for overall market outcomes.



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2. Importance of proper impact assessment

The proposed substantial reduction in mobile termination revenues can be expected to significantly affect the European mobile industry and European consumer outcomes. The ultimate effects will however depend on the precise pattern of impacts on individual operators. The net impact will be different for each individual operator, and will differ across Member States.

An attempt to quantify the impact on consumer welfare should be made. The more specific the proposals made at the EU level, the greater will be the need for a thorough impact assessment by the Commission. In particular, the Commission should not mandate a detailed approach unless it is confident that the approach will be appropriate for all Member States. Where significant decisions are to be made at the national level, then these decisions should be subject to a thorough impact assessment by the national regulator.

Impacts will vary between operators

The majority of operators, including a number of smaller operators, believe that they will not be in a position to simply absorb the loss of a large share of their termination revenues. They believe that either other prices will need to rise to compensate for the losses, or mobile operators will face reduced returns and reduced incentives for ongoing investment.

These operators also point to economic theory that shows that changing the margin received from one side of platform (or 'two-sided') markets, like mobile networks, will impact the pricing of the other services provided over the platform. Regulators such as the UK Competition Commission have extensively investigated this issue and accepted that there will be a strong 'waterbed' or rebalancing effect across mobile services, i.e. "*most of the reductions in revenue from termination charges being capped will be recovered from the retail market*".²

Empirical studies of the impact of reductions in termination charges to date suggest the existence of a strong waterbed effect, in terms of prices for other services being higher than they otherwise would be.³ This implies that the impact of regulation can only be assessed by examining the likely pattern of price changes and the consequence of such changes for demand and consumer welfare.

² UK Competition Commission, Calls to mobiles report, 2003, para. 2.563.

³ Genakos, C. and T. Valletti, "Testing the waterbed effect in mobile telephony", CEP Discussion Paper No. 827, October 2007 (available at <http://cep.lse.ac.uk/pubs/download/dp0827.pdf>) and K. Andersson and B. Hansen, "Network competition: Empirical evidence on mobile termination charges and profitability".



Other smaller operators are in quite different circumstances. Certain later entrants, in particular, find themselves making significant net termination payments to other operators. Their current growth rates have flattened, especially where they are in markets with low overall growth rates. These operators expect that the proposed cuts in termination charges will lead to significantly lower off-net call prices. They further believe that lower off-net call prices will, in turn, enable them to compete more effectively for subscribers who may otherwise be discouraged from joining smaller operators given that it would then be necessary to make off-net calls to contact the bulk of other subscribers.

Operators' competitive positions may also be affected by the removal of asymmetric regulation of termination charges that currently apply in a number of Member States. Such regulatory asymmetries are supported by some operators as a means of overcoming potential disadvantages so that they can compete in the retail market more effectively. The majority of operators consider that such asymmetries are inconsistent with competitive markets and act to distort competition between operators. As a consequence, although the operators agree that the goal for termination rates in each country should ultimately be for symmetry, operators have differing views on when it will be desirable to set uniform charges for all operators within the same market.

Market impacts will vary between Member States

The overall market impacts will depend on the interaction of the specific effects on operators within each Member State and how those operators respond to those effects. The overall market impacts are likely to vary between Member states. A large majority of operators believe that the Commission's proposals would have a negative overall impact on consumers. However, there is a minority of operators which believes that the proposals would bring positive net consumer benefits.

We outline below some of the potential positive and negative market effects of a major reduction in termination charges from current levels.

Lower prices to call mobile phones

The Commission's primary objective is based on the assumption that lower termination rates will lead to lower fixed-to-mobile calls prices and lower off-net mobile-to-mobile call prices. Lower fixed-to-mobile call prices are a likely outcome, although the exact extent will depend upon the level of 'pass-through' by fixed operators.⁴ The effect on off-net call prices is less clear cut and may vary in different markets. Lower termination out-payments will lower the cost of supplying off-net calls. However, the waterbed effect could lead some operators to seek to recover more of their costs in off-net prices to compensate for the lower termination revenues that they receive.

⁴ In this regard, we note that Ofcom found that only two-thirds of previous reductions in termination charges in the UK had been passed through into lower fixed-to-mobile prices (Ofcom, Mobile Call Termination Statement, 27 March 2007, para. 3.22).



Broader effects are likely to include higher fixed-to-mobile call volumes and potentially higher off-net call volumes. A small group of operators also believe that lower off-net prices would remove a disincentive for customers to join smaller networks (where a large share of their calls may be off-net calls to subscribers on other networks). They believe this could affect the overall development of competition. Many other operators argue that the market evidence is not consistent with the view that the level of off-net pricing is harming competition. In their view, current retail pricing should be seen as a product of dynamic competition between operators that ultimately benefits consumers.

Higher subscription and handset prices

If termination rates are reduced, many operators believe that they will need to increase prices, or reduce prices less than otherwise, to cover costs that were previously covered by mobile termination on calls to mobiles. This may be through higher subscription charges and/or handset prices. In particular, operators that experience a loss in the profitability of their subscribers as a result of the reduction in termination revenues may no longer be prepared to offer the same level of handset subsidies going forward or may remove some current low-end monthly price plans which are no longer viable to offer. Such a 'rebalancing' of prices could have broader effects including the loss of marginal subscribers over time and delays in the take-up of 3G handsets and services. In markets where mobile retail prices are on an underlying downward trend, price rebalancing may not result in actual price rises but may lead to prices not falling as quickly as they would otherwise do.

Operators have different views as to the existence and extent of rebalancing and in relation to the evidence on the impact of earlier, albeit more gradual, reductions in termination charges.

Impact on pre-paid tariffs

The European mobile communications model has flourished through the development of prepaid market that allows customers the flexibility to purchase telecommunications services as and when they need to without minimum monthly commitments. However, a significant proportion of prepaid customers receive many more calls than they make – indeed, a large number of prepaid customers make very few calls. Current prepaid plans will need to be reviewed if termination charges are substantially reduced. Operators may seek to raise calls prices or impose minimum monthly spend requirements. This could limit further subscriber growth or discourage customers from being mobile subscribers where they are concerned about committing to regular payments. An impact on prepaid tariffs may also raise wider distributional effects given that prepaid customers tend to have lower incomes than postpaid customers.

Higher outgoing mobile call prices

Alternatively or in combination with other effects, some operators believe other mobile retail prices may increase to recover the lost revenues. Higher mobile call prices would risk lower



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outgoing mobile call volumes although there may be a specific increase in off-net mobile call volumes. The effect on overall call volumes will depend on the actual pattern of price changes as well as any consequential effects on subscriber numbers and on demand for each service determined by the underlying demand elasticities.

Reduced investment in coverage and new services

The European mobile industry is still in the process of implementing a substantial investment programme. Many operators believe that the incentive to continue high levels of investment risks being harmed by higher uncertainty created by the disruptive impact of the proposals as well as the potential for lower returns arising from an inability to fully or quickly recover lost termination revenues in other charges. They believe that non recovery through termination rates of certain cost categories (e.g. common costs) will for example directly and negatively affect an operator's decision to make an investment that could fall into such non-recoverable cost category. A minority of operators believe that overall uncertainty will reduce as a result of the Commission setting out a common set of costing principles.

Conclusion

All operators agree that a major change in termination rates will have a significant impact on market outcomes. The impact is likely to depend on factors such as the state of the individual market and competitor responses. The effects are certain to vary between Member States and between operators. As a result, there are divergent views over what likely combination of effects will occur if mobile termination rates are reduced significantly, with a large majority of operators on the one hand seeing the likely impact of the change to be negative, and a smaller group of operators on the other seeing the potential for positive consumer benefits.

The differences in likely impacts suggest that it will be important to conduct comprehensive impact assessments before significant changes are implemented at EU or Member State levels. An impact assessment at the EU level should take into account the potential for effects to differ across Member States. Where there are uncertainties in relation to particular effects, these should be identified and taken into account in determining the regulatory approach.



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3. Pricing principles

In this section, we set out principles of efficient pricing that are generally agreed across the mobile industry.

GSMA considers that a fundamental principle of regulatory pricing is that regulation should not prevent operators from recovering their efficiently incurred costs while providing firms with the incentive to improve efficiency over time. This principle is important to provide the incentive for ongoing efficient investment in networks and the deployment of new services. Long run average incremental cost (LRAIC) is the established regulatory pricing model that helps meet this objective. In particular, LRAIC helps to ensure that an operator recovers sufficient revenue to cover the additional costs arising from providing the service.

In addition to the average incremental costs of particular services, the provision of mobile services also results in operators incurring significant common costs.

While operators agree that common costs need to be recovered, there are different views between mobile operators as to the best way of recovering these costs and in particular how termination charges should contribute to their recovery.

Given this difference in views, the approach to common costs will be further discussed in individual operator submissions.

There is also a difference in views over whether termination rates should reflect factors other than cost, such as traffic imbalances and the inclusion of a mark-up for network externalities.

GSMA does agree that regulation should send the right signals to maximise overall consumer benefits. This requires a comprehensive analysis of the likely overall effects of regulation (including potential longer term effects on competition and investment), rather than focusing on only the most direct effects. Where it is decided to introduce significant changes, a glide-path will be important to minimise disruption and provide greater certainty for investment with the length of the glide-path being appropriate to the circumstances of the specific market.

Finally, the approach to asymmetry in termination rates is a key area of policy debate. With respect to this issue, the GSMA believes that:

- Ultimately, asymmetry in the regulated rate between mobile operators should disappear. However there are significant differences between operators as to *when* and *under what conditions* asymmetry should be removed.
- There is agreement that this issue needs to be considered in the context of the particular market and should therefore be dealt with by the NRA.



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4. Implementing cost models

The significance differences in mobile termination rates that currently exist in Europe are likely to reflect differences in the ways in which national regulators have applied their pricing principles, rather than simply resulting from ambiguities over the appropriate principles to apply or cost differences in national markets. Bottom-up cost models are complex and rely heavily on assumptions. Even benchmarking raises a number of critical issues in implementation.

The GSMA believes that the Commission and the ERG can play an important role in establishing common 'best practice' processes, and ensuring that these are applied in a consistent way across the Member States. Ensuring best practice in implementing costing principles is important as poor implementation can carry large costs.

GSMA considers that best practice in costing should incorporate the following principles.

Transparent, consultative, processes

The Commission and the NRAs should, to the greatest extent possible, conduct open and transparent consultations. The extent to which the process is made confidential should reflect only the need to protect confidential business data. Robust modelling can be supported by providing parties with the opportunity, at an early stage, to review the basis for assumptions as well as draft models prepared. The parties ought to be able to review models with sufficient time being provided in line with the complexity of the matter being consulted upon. The consultation process should be consistent with the principles set out in the Commission's Minimum Standards for Consultation.⁵

Evidence-based assumptions and results

The assumptions and results of any modelling should be reconciled with actual operator and market data. This includes seeking additional information where there is uncertainty over key assumptions. In this regard, given that mobile networks have developed under competitive conditions, and investors have an interest in minimising cost, the GSMA notes that there are sound reasons for expecting the actual costs incurred by operators to represent efficient cost levels. As such, any bottom up modelling exercise should be reconciled to the data of actual operators in the market. A further implication is that modelling based on actual costs can represent a reasonable approach to estimating efficient charges and bottom-up cost modelling should not be seen as the only appropriate approach.

Ensuring that modelling assumptions are based on market evidence avoids the problem of 'garbage-in/garbage-out'. The output of a model can only be as accurate as the data used to

⁵ European Commission, General principles and minimum standards for consultation of interested parties by the Commission (COM/2002/0704).



generate the results. In addition to operator data, surveys and econometric analysis may be useful in particular cases to obtain evidence on which to base or test assumptions.

While international benchmarking may also be useful to check the output of a cost model, comparisons with other countries need to be undertaken with caution. It is important that the chosen comparators are themselves estimated in accordance with sound pricing principles and robust modelling. In addition, international benchmarking will only be informative where either:

- Adjustments can be made robustly to account for differences in cost and demand conditions between countries; or
- Cost and demand conditions in the chosen comparator countries are sufficiently alike to the regulator's home market as to provide a reliable estimate of the efficient charge level in that country.

As noted in Section 5 of the submission, there are a range of factors that may lead to differences between countries in the costs of supplying mobile services. In order for a benchmarking exercise to be valid, adjustments need to be made for network utilisation, input prices and cost of capital, network dimensions (coverage, geographic terrain), network purchasing power, and the quality and scope of the service offering.

Proportionality

Despite the clear need for robust and transparent processes, the modelling approach should nevertheless be proportionate. Existing models and analysis should not be abandoned unless new approaches are expected to bring benefits that outweigh the costs and uncertainties created by a change in approach. Further, establishing the basis by which charges will be set for a number of years can help minimise the uncertainty and costs of frequent cost modelling exercises.

Impact assessment

When determining the level of termination charge controls, it is critical that the NRAs conduct a thorough impact assessment.. The overall costs and benefits of the proposed change to termination regulation should be assessed against alternative regulatory options including different charge control levels. The analysis should be undertaken at a sufficiently detailed level to identify potential differences in the effects across Member States, as well as between different customer segments. Sensitivity analysis should be undertaken to examine the implications of uncertainties such as in relation to the effects on other prices, competition and investment. The Impact Assessment should confirm to the standards set out in the Commission's Guidelines for Impact Assessment.



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Final decisions are clearly explained

All NRAs should make their decision on the basis of robust consultation. Their final decision should be public, and clearly set out the reasons for the decided approach. Appropriate mechanisms for review should be in place, and the regulator should indicate when the decision will next be re-visited.

Conclusion

The Commission can achieve significant harmonisation benefits through ensuring that NRAs follow a set of best practice principles in estimating termination cost. Best practice in implementation would help minimise differences in charges between Member States that do not result from genuine cost differences and thereby support more efficient pricing across Europe.



5. Fixed and mobile networks have different costs structures

Finally, it is important to recognise the fundamental differences between the costs of mobile and fixed technologies and the manner in which those costs are recovered.

A major source of difference is in relation to the costs of the access network. In fixed networks, the access network is primarily accounted by local loops that are dedicated to individual customer premises. The cost of the local loop does not vary with the amount of traffic it carries and this cost can be efficiently recovered in line rental charges rather than call charges. As fixed networks recover a large proportion of their costs in line rental charges, fixed operators are able to set relatively low call charges including termination charges.

In mobile networks, the radio access network is comprised of base stations, related equipment and the radio spectrum. Carrying higher traffic volumes across mobile networks will generally require an increase in many network elements particularly in the relatively expensive radio access network. For example, additional cell sites will be needed to support higher traffic volumes given limited spectrum resources. Efficiency requires that termination charges be set to reflect the costs of supporting that traffic including the opportunity cost of spectrum and coverage capacity that could otherwise have been used to carry other services

Fixed and mobile networks have fundamentally different cost structures, and in particular the costs that vary with traffic levels are far more significant in mobile networks than in fixed networks, where much of the costs is fixed and associated with the access network. Cost based modelling will therefore result in significantly higher termination charges for mobile networks than for fixed networks.