Response to the ERG public consultation on a draft Common Position on symmetry of mobile/fixed call termination rates

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General statement

The level of termination rates is a key subject for industry. In fact, the level of mobile termination rates (MTRs) has significant financial consequences for mobile operators. So, there is a real economic stake in fixing the level of MTRs.

This is the reason why the Mobile Challengers Group wishes to thank the ERG for the opportunity to comment on the consultation document. A public discussion was long overdue on the regulation of termination rates. To our knowledge it is the first time ever that there is a document at EU level inviting an open discussion on this issue. This document has also the merit to describe complex economic market driven issues in a clear and understandable way. However, the underlying reasoning needs to be applied consistently, in order to avoid distortions of competition and infringement of the regulatory framework.

The ERG's consultation is concerned with whether or not mobile termination rates within a country should be the same (symmetry or asymmetry). In this paper the Challengers respond to this question by looking at the circumstances in which an asymmetry is justified and how regulators should determine the size and duration of that asymmetry. However, there are other fundamental questions concerning mobile termination rates that regulators will also need to resolve, which are not covered by the current consultation or by this response. In particular, there are questions about the ultimate level of termination rates that regulators should be aiming for or indeed whether the current wholesale payment system remains viable in the longer term given its impact on retail pricing.

First, the Challengers want to make the following statement: it is cleat that there are first entrant operators (which have benefited from high and unregulated MTRs for years) which do not want any changes today. Indeed, first entrants are mostly against cost oriented MTRs. In fact, as demonstrated below, high MTRs allow them to reinforce their market power. So, they want to keep the system from which they have benefited greatly and they still benefit. This statement shows clearly why there should be **immediate sharper reduction of MTRs for the first entrants**. More specifically, the Challengers call urgently for **marginal costs** oriented MTRs for the first entrants which have already recovered their investment. In order to safeguard the presence of smaller operators on the market (for all the reasons developed in the present document), the decrease of MTRs should be **slower for later entrants** and follow a different glide path.

The Challengers believe that this approach will:

- Increase consumer welfare because it will lead to overall lower termination rates for both incumbents and Challengers;
- Safeguard competitive efficiency as it will safeguard the presence of smaller operators on the market, which have proven to be effective and necessary for the development of competition.

To clarify our contribution, a few preliminary remarks should be made.

Symmetry as predestined outcome

While the Challengers can agree with some conclusions in the document, the main issue raised by the document is that it is based on a predestined outcome, i.e., that termination rates have to be symmetrical, either between mobile operators or ultimately between fixed and mobile operators.

Such approach relies on the Commission's advice letters, standing on dogmatic and legally unfounded requirements to limit asymmetry in order to establish symmetrical termination rates in the shortest possible time period. ERG should consider that on December 12, 2007 the European Court of First Instance (CFI) dismissed Vodafone's application challenging the Commission comments letter on the ground that such comments do not have binding legal effects. Hence, it is not mandatory for NRAs to accept and comply with such advice letters.

It should be emphasized that there is now a **considerable body of research and economic analysis that point to the need to maintain asymmetric MTRs**:

- "Competition and Regulation with Asymmetries in Mobile Market" by Laurent Benzoni and Patrice Geoffron
- LECG : "L'impact de la différentiation tarifaire entre appels on-net et off-net – rapport préliminaire pour Base » par Dr. A. Jorge Padilla, Ciara McSorley et Dr. David Sevy
- Ryan Associates for Base;
- TILEC Discussion Paper : "Interconnection and Competition among Asymmetric Networks in the Internet Backbone Market" by Eric Jahn and Jens Prüfer, December 2006;
- Wik-consult : "Study on the cost differences between the mobile networks of the E-network operators and the D-network operators" by Dr. Werner Neu;
- "Uniform termination fees as an impediment to competition? – The Fixing of mobile termination fees revisited" by Hannes Leo
- European Economic Review: "Why is on-net traffic cheaper than off-net traffic? Access markup as a collusive device" by Tommy Staahl Gabrielsen and Steinar Vagstad
- LECG : "BIPT Consultation regarding termination rates from 2008" by Dr. David Sevy, Dr. Philip Kalmus and Dr. Lars Wiethaus;

No consistency in the evaluation of the real market conditions

The consultation document sets clearly the principle of symmetry and portrays it appropriately as an economic principle applicable in a theoretical and perfectly competitive market. Despite the exceptions provided to this theoretical assumption, ERG still seems to be reluctant to accept the consequences of its own reasoning: if late market entry and the resulting scale disadvantages constitute a solid ground for asymmetrical rates, then current market trends should determine the level of asymmetry and the duration of such asymmetry. The document lacks consistency on this point.

Furthermore, the document does not provide any empirical evidence of how long it really takes a third, fourth of fifth entrant to reach comparable market shares to the early entrants. This evidence exists and shows that practically NONE of the late entrants have managed so far to reach these market share levels. This is a consequence of inadequate regulatory measures failing to remove barriers to entry.

The document recognizes that late entrants suffer from disadvantages but does not grasp the full extent of those disadvantages:

- For instance, the document describes the impact of above cost MTRs combined with low on-net rates as a reason to apply asymmetrical rates. However, it fails to underline that such behavior was and is the norm for the large operators. They have been using this lock-in practice for years to prevent small operators from reaching a fair share of the market.
- ERG refers also to differences in frequency allocations as a justification for asymmetrical rates. However, once again it fails to acknowledge that discrimination on frequencies has also an impact on customer acquisition: indoor coverage is more difficult to achieve with 1800 or 2100 MHz frequencies, thus customers tend to choose 900 MHz operators. Once established, this impression of low coverage is almost impossible to modify.
- Moreover, market distortions (in the wholesale and the retail market) substantially explain how the larger operators strengthen their position to the detriment of the smaller operators. These factors are not sufficiently taken into consideration in the ERG consultation.

Finally the document is not consistent in its conclusions. Symmetry in MTRs is only appropriate if there is symmetry in the positions of operators. The fact that cost differences and market distortions disadvantage smaller operators means that all the operators are not in the same position. Imposing symmetry in such circumstances would be contrary to the non-discrimination principle and dramatically distort the competitive dynamics.

No historical perspective

Historical perspective is of utmost importance when related to MTR regulation: profits made by incumbent operators from interconnect revenues are accruing more and more each year. A consumer oriented approach of the issue should necessarily consider them. As explained below, they constitute monopoly profits for incumbent operators to the detriment of consumer welfare.

First entrants have managed to take a large part of the market solely because they were the first in the market when demand exploded. They have also benefited for several years from exclusive rights. Finally, they manage to keep their customer base, often through abusive practices such as low on-net rates, not respecting non-discrimination obligations, agreements of long duration, preventing number portability, etc.

This is confirmed by facts: when "first entrants" in a country try to start up a business as "late entrants" in another country, the business is rapidly sold, e.g. Orange in Denmark and The Netherlands, Vodafone in Sweden, etc.

No definition of an "efficient" operator

The ERG consultation document argues that it is necessary to set symmetric termination rates to provide an incentive for all operators to be efficient.

Currently, many cost models define an efficient operator by market share (the volume of traffic on the operator's network). If the volume is lower than the largest operator or lower than a theoretical efficient operator (for example, one that has a market share equal to the total market share divided by the number of operators in the market, e.g. 33% in a three operators market) the implied conclusion is that the operator in question is inefficient. This is because only the costs of the "efficient" operator are allowed to be recovered.

An "efficient operator" cannot be defined by reference to market share.

Such a theoretical definition of efficiency has no basis in economics, and is not appropriate for the following reasons:

- In its purest form it would mean that a monopolist would be the most efficient operator. It completely goes against the purpose of the policy of liberalisation, which aimed at solving the problems created by monopolists.
- It ignores the manner in which governments and regulators implemented liberalisation, which was by an allocation of licenses spread over time (often with a gap of several years between licenses). Obviously, the operators that entered the market later have less volume of minutes on their network (economic research has confirmed that this is the case in almost all Member States). The timing of licence awards is a factor that was beyond the control of the operators.
- It ignores objective cost differences beyond the control of operators e.g. it is well recognised that it is more expensive and difficult to provide coverage at higher frequencies (1800 and 2100 MHz) than at low frequencies (900 MHz). Furthermore, due to changes in (local) government policy, it has become more difficult and expensive to find suitable sites for masts. These and other factors are beyond the control of operators and a late entrant operator cannot be classed as inefficient because it suffers from these factors.
- It ignores barriers to entry which existed and still exist today (because of continual competition distortions) and which prevent small operators from gaining market shares.
- It also fails to recognize that, even in competitive markets, all suppliers do not charge the same price. The "law of one price" for all operators does not hold. It is a flawed basis for regulating MTRs.

Depending on the market share of the theoretical "efficient" operator, this approach will always lead to either the smaller operators having to work below their costs or the larger operators being allowed to work above their costs (and making excessive returns on their network investment) or both. This cannot be considered an "efficient" outcome.

If the principle of an efficient market is used to argue for symmetrical rates in order to avoid inefficiencies on the part of late entrants, the same principle should be used to avoid monopoly profits on the part of first entrants. In a perfectly competitive market there is no place for monopoly profits.

Consequences of such theoretical approach

The ERG's proposed approach would ultimately lead to more competition distortions. The document does not anticipate the resulting distortions of competition due to the differences in cash flows generated by MTR revenues between operators. For instance, applying symmetrical rates at the level of a theoretically efficient operator in a market meant that the incumbent can charge rates above its costs while late entrants are weakened because they have to charge prices below their costs.

No benefit for end users

The document provides no answer to the current issue in most Member States: MTR reductions are not passed on to end users. Therefore, the whole exercise should focus on termination revenues, interoperability and balance of traffic.

This is what Matthias Kurth, President of the Federal Network Agency (BNetzA - Germany), emphasized when he launched the discussion by noting that, "at the end of the day, the interconnection issue is all about revenues. It needs to be understood, in particular, in conjunction with its impact on competition: Will competition be enhanced, or endangered, by changes to interconnection arrangements?" (WIK)

Discussing termination rates without also discussing the volumes of terminating minutes that are involved leads to a theoretical discussion unrelated to the market reality.

The cash flow implications of terminations rates should be investigated - compared to the costs of each operator - and regulated if necessary.

Consumer priority is MTR decrease

ERG sets priorities on achieving symmetry of MTR. Challengers consider that such a perspective is wrong as it does not address the real priority for consumers, which is to establish as fast as possible cost oriented MTRs:

- According to ERG, the average differentiation of MTR is 0.9 c€ whereas average above cost MTR represents much more;
- High MTRs have major anti-competitive effects;
- High MTRs are contrary to the regulatory framework as they allow unjustified margins for incumbent operators.

General questions

QUESTION G1:
Do you think that the principles outlined in the general economic introduction cover adequately the underlying economic situation of both mobile and fixed termination markets?
o If yes, do you think they are sufficiently reflected in the two parts on "MTR symmetry" and "FTR symmetry" and that they are consistently applying the principles?
o If no, what do you think is missing and which reasoning should be added?

No, we do not believe that the document adequately reflects the economic reality of the mobile market.

We believe that there are four issues with the document in its current form:

- **The document underestimates the impact and the structural nature of several market distortions**, some of which are upheld as reasons for asymmetrical rates. For instance:
    - Market maturity (with penetration levels exceeding 100%), which prevents any convergence of market shares within a short or medium time frame.
    - On-net offers of larger operators / incumbents, which are designed to retain existing customers and attract new ones and which cannot be replicated to the same extent by the Challengers. The only competitive answer for the Challengers is to commercialize "all network tariffs" that are set as close as possible to the on-net pricing level of larger operators. Such "all network tariffs" tend to increase the volume of traffic to other network operators, thereby raising the small operators' interconnection costs. As a result of the combination of aggressive on-net prices and high MTRs, either the small operators are foreclosed of the most valuable segments of the mobile market, or they incur large interconnection deficits in favour of larger operators.
    - Replication of successful offers due to the inflated financial health of first entrants / incumbents. With the extra profits from high MTRs, first entrants / incumbents have more money to spend on marketing, advertising and customer acquisition which will, mechanically, reinforce their market power.
    - Difference of frequency given to the MNO through the spectrum license (900 MHz vs 1800 or 2100 MHz). 900 MHz frequencies (typically granted to first entrants) are less attenuated by air and by obstacles (mountains, trees, houses) than 1800 or 2100 MHz licences (typically granted to late entrants). As a result, less equipment is needed to cover a territory with 900 MHz frequencies than with 1800 or 2100 MHz frequencies.
    - Locked distribution networks.
    - Incumbents' aggressive retention programs and efforts to put in place barriers to switching (such as refusing to implement or upgrade number portability systems).

- **The starting premise of the document is wrong**: the current issue is mainly an issue of excessive profits and barriers to entry and no longer an issue of market entry assistance. The document should have focused on the real market driver i.e. the level of termination rates, instead of emphasizing on an ancillary issue, MTR differentiation.

- **The conclusions drawn in the document insufficiently reflect the economic reality** as to duration and level of asymmetry required to solve the distortions currently caused by termination rates.

- **There is no impact analysis regarding the end of MTRs asymmetry**. In the current market conditions (i.e. first entrants' MTRs are much higher than their costs and market shares are still completely unbalanced in favour of first entrants), applying the symmetry principle without implementing cost orientation and without leaving late entrants enough time to recover their investments would have harmful effects on competition.

In particular, our understanding of the economic situation of the mobile termination market is as follows:

- First entrant operators have benefited from high and unregulated MTRs for years. Today, they do not want any changes and are mostly against cost oriented MTRs. As stated above, high MTRs allow them to reinforce their market power.

- This is the reason why the Challengers believe that the current regulation of MTRs is harming competition and is detrimental to consumers. It is now time to change.
- In this context, the Challengers call urgently for significant reductions in MTRs for the first entrants with the goal of achieving **marginal costs** oriented MTRs for the first entrants which have already recovered their investment.
- In order to safeguard the presence of smaller operators on the market (see answers to Mobile specific questions), the decrease of MTRs should be **slower for later entrants** and follow a different glide path.

QUESTION G2:
Any further comments regarding consistent regulation of both MTR and FTR with regard to symmetry is welcome.

In the context of convergence between fixed and mobile services, similar situations and similar goals should be treated with similar methodologies and similar costs models.

Indeed, as differences of treatment between fixed and mobile networks can weaken the cross platform competition between fixed and mobile operators, the consistent application of methodologies for both types of network seems unavoidable.

Costs taken into account for MTRs are:
- Access network costs (that vary with the traffic);
- Core networks costs (fixed costs generate to coverage obligations).

Capacity of mobile network is directly linked to its use, because an increase in traffic requires an increase in the number of base stations. Therefore, any increment of the volume of traffic received by a mobile operator leads to further investments, which need to be covered by MTRs.

Conversely, once established, fixed network are not limited in capacity (or not within normal limits).

It is therefore difficult to consider symmetry between MTRs and FTRs.

Mobile Challengers' view is that regulation of both fixed and mobile markets should not try to drive market forces in some direction but should ensure there are no market distortions or barriers to prevent market developments. Indeed, competition is the best "fuel" for market growth and innovation both for fixed and mobile markets and potentially for a future convergent market.

The Challengers stress that the regulatory approach concerning MTRs and FTRs should remain neutral and not set artificial objectives, in order to provide appropriate regulation to the different situations. Current structural and economic differences between fixed and mobile markets make it difficult even to predict if and when MTRs and FTRs will converge.

QUESTION G3:
Finally we would like to ask you to elaborate on the question of converging MTR and FTRs and the timeframe you envisage for this.

Although we believe that the correct regulation of the termination rates will lead to rates which will be lower than the current regulated rates, we don't see that there is a requirement for mobile termination rates to converge with fixed termination rates. When, as is currently the case, termination rates are based on cost recovery, the mere fact that **the costs and the capacity requirements / restraints are not the same** will lead to different results.

As stated above (in G2), the cost of providing capacity on mobile networks exceeds that for fixed networks. Therefore, MTRs will and should remain higher than FTRs. MTRs should take into account:
- The costs to expand capacity;
- The limitations of capacity on a mobile network;

- The very high annual retributions to be paid for by mobile operators in relation to usage of their frequencies;
- The very high license fees that mobile operators have paid to start their business;
- The taxes that are levied on antenna sites.

Mobile questions

QUESTION M1:
Do you agree with the general principle promoting symmetry: "*Termination rates should normally be symmetric*"?

- Such a principle could be justified if all operators were symmetric (with similar costs and similar positions and market shares). In this case, termination rates should effectively be symmetric.

However, facts clearly show that order of entry determines the initial and future position of competitors in terms of market shares and deeply influences the efforts required to gain an equivalent number of customers between incumbents and late entrants (see question M4).

Hence, differences in the time of entry lead to **differences in market shares** and therefore differences in economies of scale / cost differences.

And because of the current inertia of the market, the situation **will not change in the near future**.

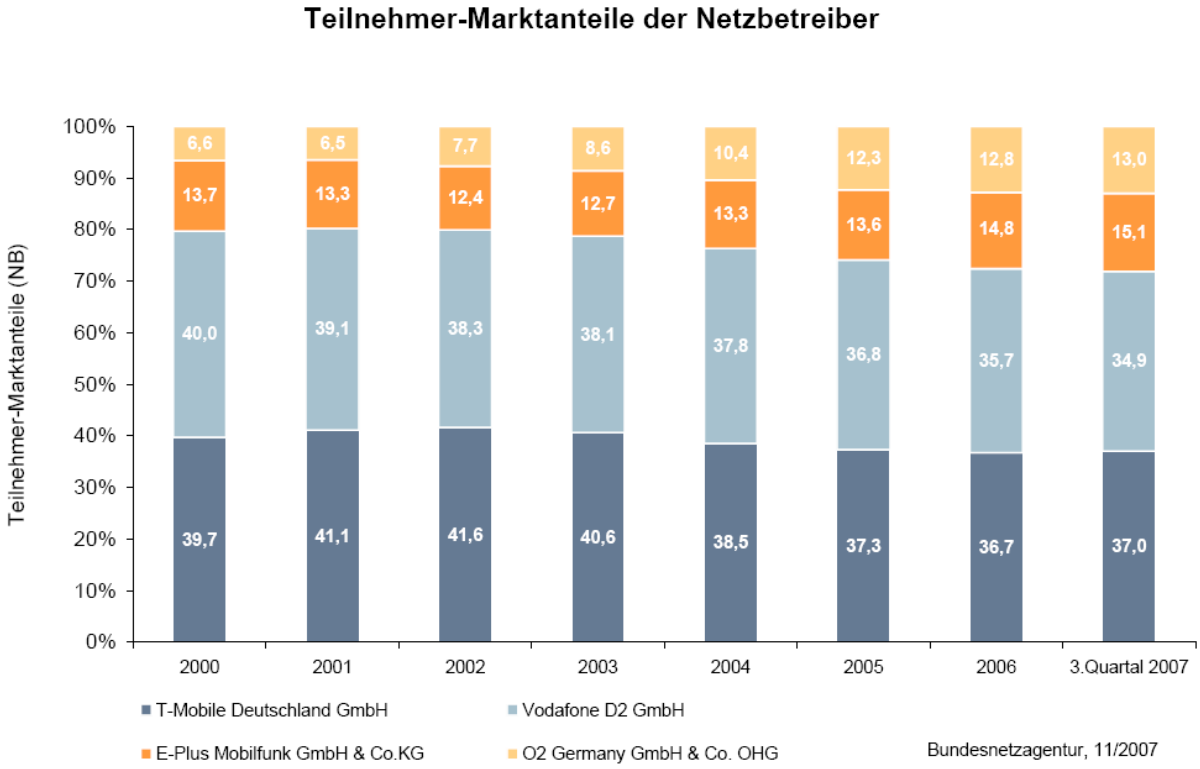
As the goal of NRAs is to "promote efficiency, sustainable competition and maximize consumers' benefits" (see Art 13. 2.), NRAs should aim for market efficiency instead of limiting their approach to market share symmetry and symmetric MTRs.

- The symmetry principle wrongly postulates that mobiles markets are fluid enough for late entrants to catch up rapidly with their competitors.

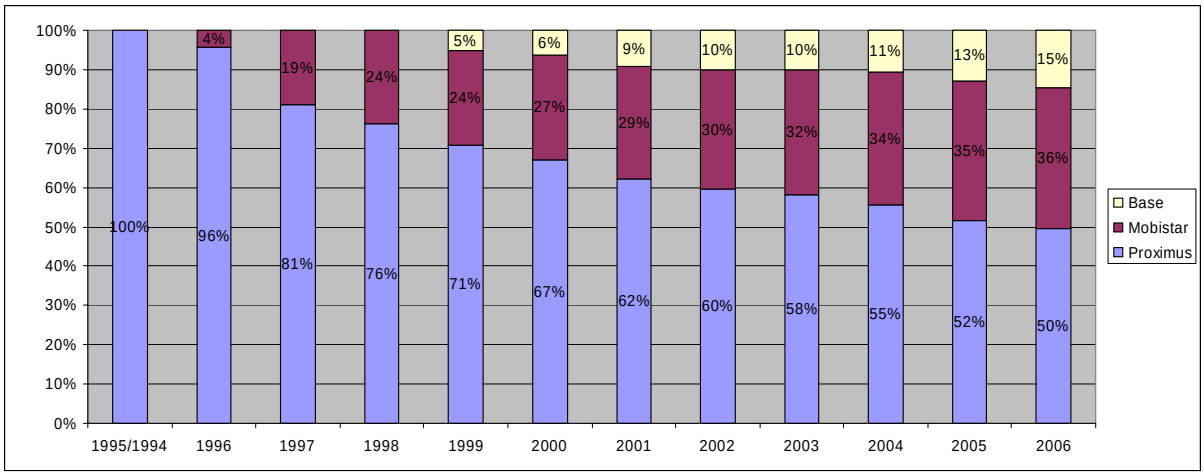
Because of the evolution of the market structure, it becomes more and more difficult to gain market share. Until 2002, mobile markets were growing fast and penetration rates were rocketing over 10% per year; but, since 2002, market growth has been slowing down:

  - In **France**, in 2006, Bouygues Telecom gained only 0.4% net market shares with its very successful NEO offer. Moreover, if Bouygues Telecom gained 25% of the all new mobile subscriptions, it would need 8 to 9 years to obtain a 25% market share (from 17,8% currently).

  - In **Germany**, it took e-Plus 1 year (between 2005 and 2006) to grow from 13.6% to 14.8% market shares (in terms of number of subscribers). Since last year, there has been no noticeable evolution (only +0.3% where it grew +1.2% the previous year). [See chart below.] Although the German market grew with more than 20 million customers in the last two years, the market shares of the four players remained nearly identical.



o In **Belgium**, it took Base four years (between 2002 and 2006) to gain 5% in market share in revenues. This was a spectacular growth from a company that was virtually bankrupt. However, currently, the growth in revenues is slowing down. It seems completely impossible to do the same thing over again and again because Belgium is a three players market (so 33% is the "fair share" of the market). After 8 years of activity, BASE as third entrant has managed to take +/- 23% of the market in terms of subscribers and only 15% market share in revenues. [See chart below.]



o In **Austria**, Professor Hannes Leo estimated that it would take a new entrant 10 to 20 years to reach a 20% market share[1].

[1] Hannes Leo, Uniform termination rates as an impediment to competition?, Österreichisches Institut für Wirtschaftsforschung.

This **market inertia** results from market maturity (with penetration levels exceeding 100%), locked distribution networks, replication of successful offers due to the inflated financial health of incumbents and incumbents' aggressive retention programs (mobile portability is not implemented in a customer friendly way, contracts duration by first entrants is too long, fidelity programs by first entrants, first entrants apply different prices for on-net calls and for off-net calls, etc).

This phenomenon **prevents any convergence of market shares within a short or medium time frame**.

Furthermore, the network effects that large operators create through on-net/ off-net tariffs reinforce the barriers to entry and expansion. The strategic use of on-net/ off-net tariffs is made possible by high termination rates. Recent studies, such as that by Cabral[2], demonstrate this. Therefore, regulators' current policies of maintaining high termination rates are reinforcing the disadvantages faced by small operators, which necessitate the maintenance of asymmetries.

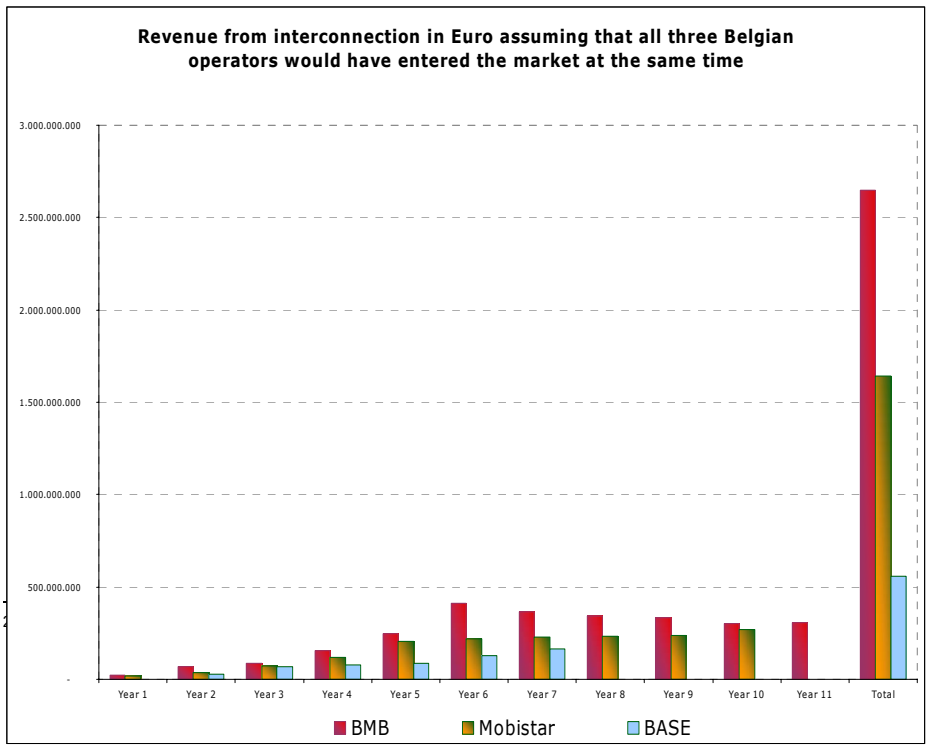
- <u>The symmetry principle does not take into account historical perspectives and high margins of larger operators</u>

MTRs have historically been used to provide assistance to mobile operators building out their networks and acquiring subscribers. This is most apparent for the first entrant operators, which benefited from high and unregulated MTRs in the 1990's. At the start of GSM networks (in the early to mid 1990s), MTRs in excess of 30 €cents were not uncommon. The justification for MTRs above cost has been to finance the roll-out of mobile networks and to encourage subscription through subsidised handsets and low call charges (the "network externality'). Hence, MTRs have provided assistance to operators entering the mobile sector.

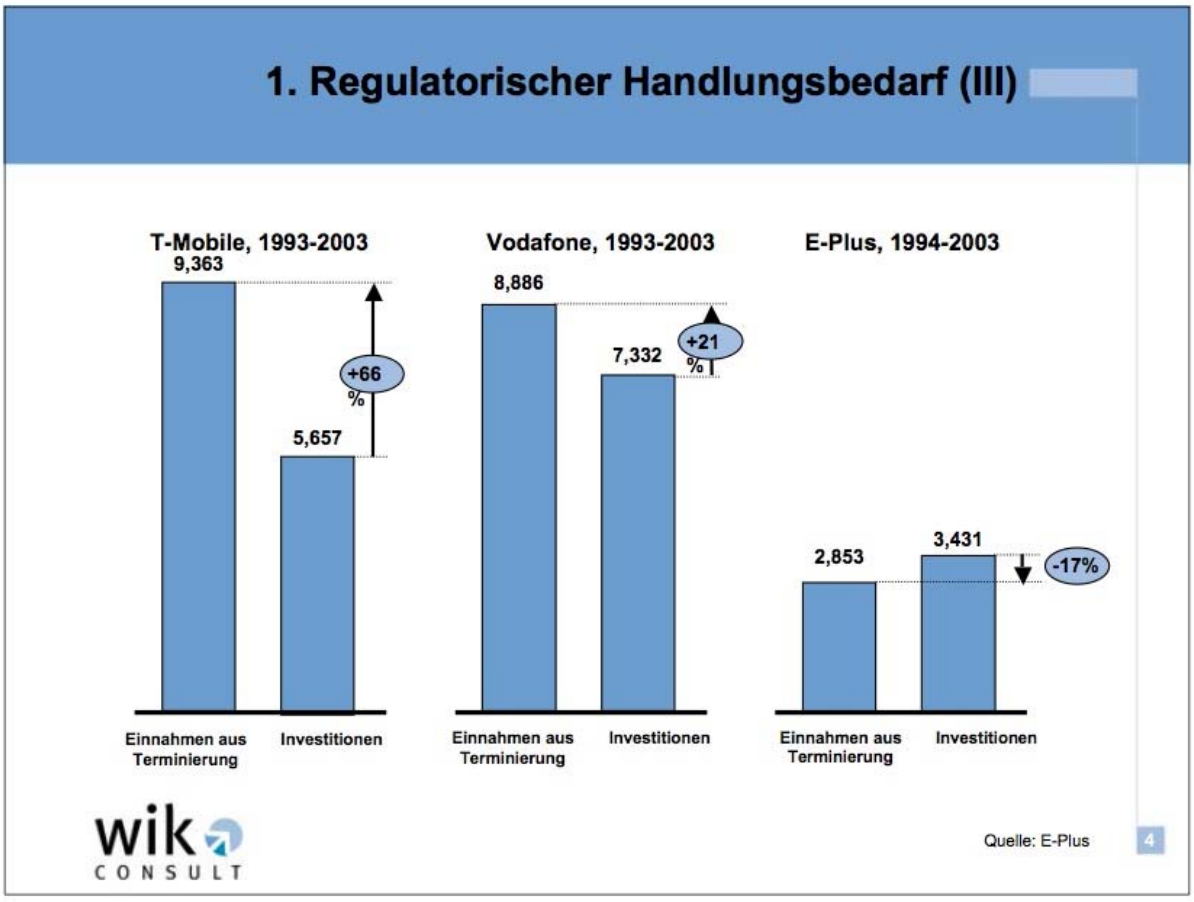
The start of price controls on MTRs coincided with the time when third and fourth entrants entered the market. This meant that late entrants were subject to price controls almost immediately upon entry. In most cases, late entrants had hardly started their business when they had to compete head-on with financially strong first entrants as a result of a lenient regulation. The result is clear: first entrants have benefited hugely from the evolution of MTR policies, whereas late entrants have either gained little or not benefit or have suffered as a consequence of these policies.

As they have benefited from high and unregulated MTRs for years, first entrants have more than recovered their initial investment and MTR revenues now constitute almost pure profits. In addition, an operator with a large customer base will receive more MTR revenues than one with a small base.

For instance, in **Belgium**:

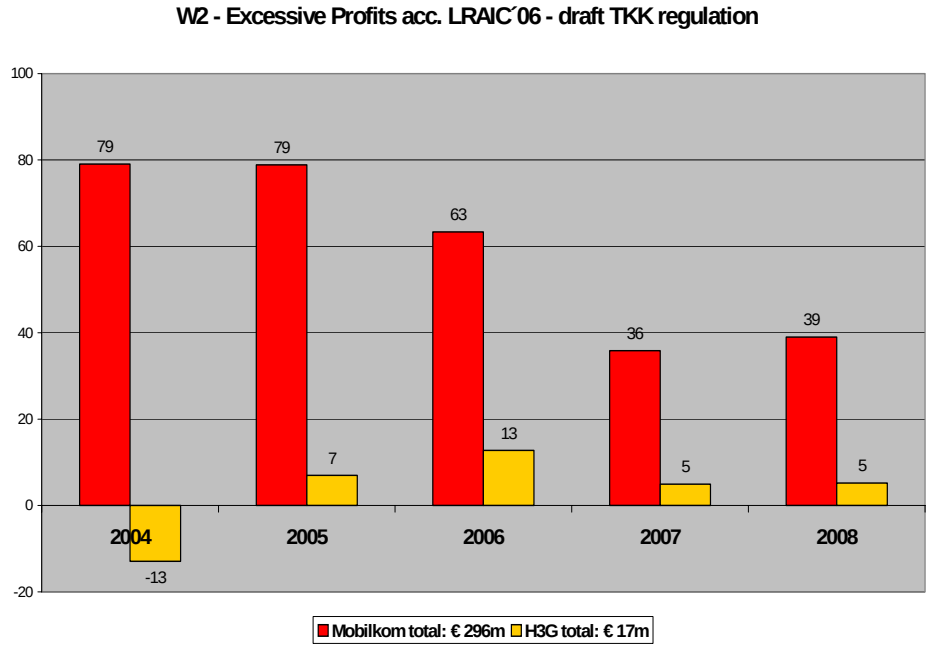


The statement is the same in **Germany**:



In the same way, **the Austrian regulator** set glide paths for the operators, with all operators converging on the same end point (symmetry) but with smaller operators starting with higher rates. However, using the regulator's own estimates of costs, it is evident that the incumbent, Mobilkom, will earn far more profit from MTRs over the price control period than will the last entrant, 3 Austria.

The chart below uses the regulator's estimates of cost and shows that Mobilkom will have earned 296 million € in profits from MTRs, compared to the 17 million € in profits for 3 Austria:



This has an impact on competition in the retail market. Regulators must take this into account in the transition from one MTR policy to another, otherwise they risk distorting competition and disadvantaging late entrant operators.

It is discriminatory to have a policy of permitting early entrants to recover their investment through high MTRs but to deny late entrants an opportunity to make an adequate return. Not only is it discriminatory, but it will distort competition.

Incumbents, having achieved a return on their initial investment, partly through high MTRs (in some cases, MTRs have more than paid the original investment and an adequate return), are able to set retail prices at variable costs without an element of return. Late entrants, not having had the benefit of years of high unregulated MTRs, must, if they are to provide a return to their investors, price at levels that cover not only variable costs but also that provide a return. A policy of capping all operators' MTRs at the same level, regardless of what has previously happened, is not only discriminatory, but it forces late entrants either to accept inadequate returns (thus creating a barrier to future entry and a disincentive to invest) or to be uncompetitive.

Not taking into account the historical profits contributes to the issue of ongoing monopoly profits generated by the first entrants.

Furthermore, any decision that is taken now on MTR regulation will have an impact on future cash flows between operators. In this respect, developments in the retail market (e.g "any network" offers) have a direct impact on the balance of traffic between operators and, therefore on their respective cash flows. First experiences of Base show that these "any network" offers do have an impact on the traffic flows between the operators, i.e., they increase the traffic towards other operators. This is confirmed by other operators (Bouygues Telecom in France, 3UK). Contrary to what the Commission claims in some of its advice letters, this is an evolution that is not controlled by the operator. For instance, as the larger operators have copied the free minute promotions of Base, Base is forced to look for another differentiating element. The one that is still differentiating and which contributes to consumer welfare (because rates are lower and transparency is greater) is "any network" offers. Not taking into account this evolution in the determination of the MTR regulation will have two consequences:

- Massive financial transfer (subsidy) from the later entrants to the larger operators.
- No more innovation in the market.

- In this context, regulation of MTRs should take into account the different positions of operators.

The **principle of non-discrimination** requires that operators in similar positions should be treated similarly, but also that operators in different positions should be treated differently, according to their circumstances.

This is the reason why we don't agree with a general principle promoting symmetry.

Exception to take into account exogenous factors, not related to a late entrance:

QUESTION M2:
Do you agree with the exception to take into account exogenous cost differences: "*asymmetry is only acceptable to take into account exogenous factors, outside the control of operators*"? The only example, which is not related to a late entrance, identified by ERG is cost differences due to the spectrum licensing holdings. Can you identify other exogenous factors?

We agree with this principle: as said before, regulation of MTRs should take into account the different positions of operators: **it would be discriminatory to regulate all operators to the same 'cost' level**, when, due to objective reasons that are exogenously determined, the operators do not have the same costs.

We agree with the fact that **order of entry** affects the frequency given to the MNO through the spectrum license (900 MHz vs 1800 or 2100 MHz). The lower the frequencies granted, the lower the coverage costs: 900 MHz frequencies (typically granted to earlier entrants) are less attenuated by air and by obstacles (mountains, trees, houses) than 1800 or 2100 MHz licences (typically granted to later entrants). As a result, less network equipment is required to cover a territory with 900 MHz frequencies. As stated by the ERG, spectrum license holdings can be responsible for costs differences between earlier and later entrants.

But there are indeed some **other objective cost differences** (even not related to late entrance) that justify the setting of different MTRs. For instance, **differences in bargaining power** between operators lead to differences in unit cost of equipments: When considering the same frequencies larger MNOs benefit from a stronger bargaining power than smaller MNOs leading to an asymmetry in network costs.

Furthermore, **several market distortions** constitute exogenous factors that justify asymmetrical MTRs:

- Market maturity (with penetration levels exceeding 100%), which prevents any convergence of market shares within a short or medium time frame.
- On-net offers of larger operators / incumbents, which are designed to retain existing customers and attract new ones and which cannot be replicated to the same extent by small operators. The only competitive answer for small operators is to offer "all network tariffs" that are set as close as possible to the on-net pricing level of larger operators. Such "all network tariffs" tend to increase the volume of traffic to other network operators, thereby raising the small operators' interconnection costs. As a result of the combination of aggressive on-net prices and high MTRs, either the small operators are foreclosed of the most valuable segments of the mobile market, or they incur large interconnection deficits in favour of larger operators.
- Replication of successful offers due to the inflated financial health of first entrants / incumbents. With the extra profits from high MTRs, first entrants / incumbents have more money to spend on marketing, advertising and customer acquisition which will, mechanically, reinforce their market power.
- Locked distribution networks.
- Incumbents' aggressive retention programs.

QUESTION M3:

Do you agree with the following principle: "*Assuming that cost differences due to different spectrum allocation are properly evaluated, they may justify an asymmetry*"?

We agree with the principle.

There are two types of GSM frequencies: 900 MHz and 1800 MHz. Later entrants were mainly granted 1800 MHz while first entrants were granted 900 MHz which implies higher costs for later entrants:

- More expensive spectrum
- Higher costs of locating mast sites
- Accelerated roll-out to match the coverage of first entrants with less efficient frequencies requiring more base stations…

The same principle applies to late entrant 3G-only operators that only have 2100 MHz spectrum and are competing against first entrants with 900 MHz spectrum.

All these cost differences clearly justify an asymmetry. But, as mentioned above (M2), there are other cost differences that need to be taken into account in order to justify asymmetric MTRs.

Transitory exception to take into a significantly late entrance:

QUESTION M4:
Do you agree with the following principle: "*If the level of competition in the mobile retail market asks for measures which create incentives for new network level entry or measures that strengthen the position of small new entrants, substantial differences in the date of market entry can justify an asymmetry for a transitory period"*?

The Challengers consider that this is not the right question. Asymmetrical MTRs are not justified in order to help the smaller operators, but rather in order to remove the entry barriers which exist on the mobile market.

As explained above, differences in time of entry lead to differences in market shares and therefore differences in economies of scale / cost differences.

- Market share is the prime determinant of network costs.

In fact, as most of the cost models developed by NRAs in Europe indicate, mobile (unit or average) network costs are driven by large economies of scale.

- In most European markets, delay of entry and entry order determines the present market shares of operators.

Several **empirical studies** clearly indicate that most later entrants in Europe have seldom been in a position to compete on equal terms with earlier entrants and consequently couldn't fully "catch up" with incumbents' MNOs.

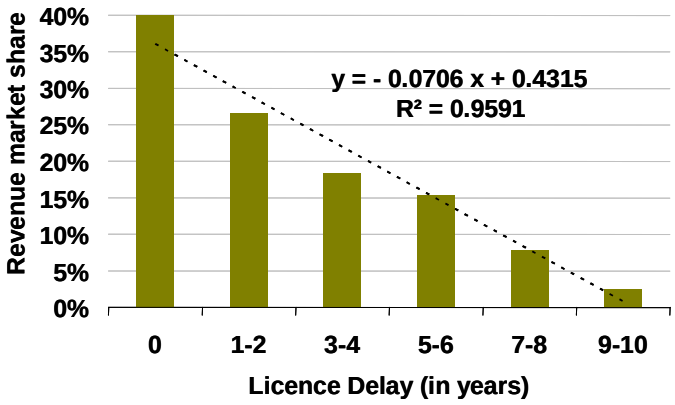
In 2005, Bijwaard & alii (Tinbergen Institute) published an empirical study about European mobile markets and concluded: "*Depending on the specific conditions of entry, it seems fair to conclude that the first entrant may still gain a large market share, but that subsequent entrants have much more difficulties gaining market shares*"[3].

Hannes Leo is on the same line (Österreichisches Institut für Wirtschaftsforschung), showing – empirically this time – that national equilibriums mainly reflect the "order of market entrance":
"*The placing of operators according to their market shares – as an average through the whole of Europe - exactly reflects the order of market entrance. In detail first operators on the markets with three operators dispose of market shares of about 51%, the second of about 33% and the third of*

[3] Bijwaard & alii, « Early Mover Advantages: an Empirical Analysis of Telecom Markets, Tinbergen Institute, 2005.

16%. In markets with four operators average market shares of first movers are clearly below, i.e. 36%, the second operator holding 30%, the third 22% and the fourth 12%"[4].

The figure below shows that in EU-15[5] the delay of entry is strongly correlated with the licence delay and confirms that a mechanism of "non-catching-up" is unambiguously identifiable in European mobile markets.



The table below shows the order in which operators entered the market and their market shares in 2007 Q4. The operator with the largest market share is highlighted. It is readily apparent that **the first entrant is also the market leader in most Member States** (in fact in all of the EU-15 except three).

Sequence of entry and respective market shares as of Q4 2007						
EU 15		1	2	3	4	5
Austria		Mobikom (42%)	**T-Mobile (35%)**	**ONE (18%)**	**H3G (5%)**	
Belgium		Proximus (43%)	**Mobistar (30%)**	**BASE (27%)**		
Denmark		TDC (44%)	**Sonofon (25%)**	**Telia (21%)**	**Other (8%)**	**H3G (2%)**
Finland		**Elisa (36%)**	Sonera (37%)	**DNA (20%)**	**Other (7%)**	
France		Orange (46%)	**SFR (36%)**	**Bouygues (18%)**		
Germany		T-Mobile (37%)	**Vodafone (35%)**	**E-Plus (15%)**	**O2 (13%)**	
Greece		**Vodafone (30%)**	**Wind Hellas (26%)**	Cosmote (36%)	**Q-Telecom (8%)**	
Ireland		Vodafone (43%)	**O2 (32%)**	**Meteor (18%)**	**H3G (7%)**	
Italy		TIM (41%)	**Vodafone (33%)**	**Wind (17%)**	**H3G (9%)**	
Luxembourg		P&T (48%)	**Tango (27%)**	**VOX (25%)**		
Netherlands		KPN (51%)	**Vodafone (22%)**	**T-Mobile (15%)**	**Orange (12%)**	
Portugal		TMN (43%)	**Vodafone (36%)**	**Optimus (21%)**		
Spain		Telefonica (45%)	**Vodafone (32%)**	**Orange (22%)**	**Yoigo (1%)**	
Sweden		Telia (45%)	**Tele2 (28%)**	**Telenor (17%)**	**H3G (8%)**	**Other (2%)**
UK		Vodafone (25%)	O2 (25%)	**T-Mobile (24%)**	**Orange (21%)**	**H3G (5%)**

6

[4] Hannes Leo, Uniform termination rates as an impediment to competition?, Österreichisches Institut für Wirtschaftsforschung.

[5] Set of data about 45 mobile operators in EU-15 markets. Sweden is excluded because operators entered at the same time in Sweden.

[6] UK is the only case of balanced market shares. On the UK market, license delays and entry delays were less than 2 years. Furthermore, to compensate for the late entry disadvantages between first and late entrants, OFTEL implemented regulatory measures to favour the last two 2G operators (banning operators from using their own distribution networks). Orange and T-Mobile in the UK market caught up with the incumbents, thanks to this unique regulatory environment.
The Greek market is the only European market, in which the 3rd entrant is a leader. Indeed, as a subsidiary of the fixed incumbent OTE, Cosmote has capitalized on the OTE brand: "Cosm – OTE", has benefited from the OTE distribution network, has used the OTE sites to deploy its network and did not need to negotiate interconnection charges with OTE.

- In the meantime, MTR policies have favored first entrants for years.

In the 1990s, early operators benefited from high and unregulated MTRs, whereas fixed operators were setting cost-oriented termination rates. This situation could be understood as a subsidy from fixed to mobile networks. This situation of subsidization, that is still lasting, benefited mainly first entrants, who have been able to recover their costs because of this policy.

The start of price control coincided with the time when third and fourth entrants entered the market. This meant that late entrants were subject to price controls almost immediately upon entry.

Most of the time, late entrants had hardly started their business when they had to compete head-on with financially strong first entrants as a result of a lenient regulation.

- For these reasons and in this context, differences in the date of market entry justify asymmetric MTRs.

In fact, it would be discriminatory to let incumbents benefit from many years of high and unregulated MTRs, allowing them to recover their investment through MTRs alone, whilst regulating late entrants soon after market entry at the same price level, often below their costs at a fraction of the rate allowed to first entrants.

- Hence asymmetric MTRs would be justified for a transitory period that should end with the convergence of market shares and with the compensation of historic effects.

As we have seen above, market share is the prime determinant of network costs and late entrants suffer from lower market shares independently from their efficiency. Moreover as MTR policies has favoured first entrants by giving a subsidy proportionate to volumes of minutes, **the transitory period of asymmetric MTRs should only end when equivalent market shares are reached and when historic side effects in favor of larger operators are compensated.**

QUESTION M5:
Do you agree with the principle of keeping the level of asymmetry "*reasonable*"?

It depends on the meaning / definition of "reasonable". The concept of "reasonable asymmetry" is not provided for in the regulatory framework and it does not correspond to economic reality.

We consider that asymmetry should reflect cost differences and market distortions and not be based upon a theoretical approach. In this context, a "reasonable" asymmetry is one that is sufficient to offset the late entry disadvantages.

Introducing a concept of "reasonable asymmetry" **should not be used to undermine the economic arguments for asymmetry in order to become a predestined symmetric outcome**.

QUESTION M6:
Do you agree with the fact that an initial level should be accompanied by a glide path towards symmetry?

Incumbent operators have already recovered the cost of their network through MTRs. Maintaining high MTRs for them is therefore contrary to the interests of consumers and competition and is resulting in windfall profits. This is the reason why the Challengers call urgently for significant reductions in MTRs for first entrants with the goal of achieving **marginal costs** oriented MTRs for the first entrants which have already recovered their investment. In the meantime, the decrease of MTRs should be **slower for later entrants** and follow a different glide path. Indeed, for all the reasons developed above, late

entrants should benefit from higher MTRs during a transitional period, in order not to further weaken them, leading to a decrease in competition on the retail market.

In any case, the timing should consider at minimum **initial differences between incumbents and new entrants** such as:

- The order and delay of entry;
- The first mover advantages such as the opportunity to pre-empt scarce assets: the best shop locations, the best technical sites for the network…

As mentioned below (M7), the appropriate glide path could vary from country to country.

As developed in Appendix 1, the timing should also consider **market frictions** on the evolution of market shares. Evidence of these frictions can be showed by the analysis of the historic evolution of market share in EU 15 mobile operators. These frictions can either influence the speed of convergence (these factors limit the number of customers who churn from one operator to another) or influence the target of convergence (these factors are relevant to the share of acquisitions).
The main frictions are:

- The churn rate, distinguishing between the internal and external churn rate: this factor reflects the preference for the churners to stay in the same network and influences the speed of convergence;
- The sizes of distribution networks that are correlated to the acquisition market shares: this factor influences the target of convergence;
- Retail on-net and off-net offers combined with MTRs above costs results in a network effect in favour of larger mobile operators: this factor influences the speed of convergence.

Moreover, those who already had a glide path should no longer get one again.

QUESTION M7:
Do you agree with the fact that national factors should be taken into account to evaluate the length of the transition period?

We agree with the ERG: the length of the transition period depends on national factors, particularly:

- Date of entry
- Maturity of the market
- Market fluidity and churn rate, such as number portability
- Level of competition in the market
- Relative market share position between mobile operators
- Distribution network
- Coverage obligations
- Infrastructures fixed and variable costs per site
- Frequency allocation
- Timing of MTRs regulation
- Aggressive on-net / off-net offers of incumbents
- Interconnection traffic balances
- Differences in licence fees and conditions
- Period of regulatory holidays for incumbents

Transitory exceptions before MTRs are at cost, to limit distortions created by MTRs above costs:

QUESTION M8:
Do you agree that in specific market circumstances (MTRs tariffs are significantly above MTR costs, there are high traffic imbalances between mobile operators and benefits of a transitory asymmetry outweigh any short term disadvantages of doing so), a temporary asymmetry may limit competitive distortions?

Once again, this is not the right question. The question is not whether a temporary asymmetry may limit (or not) competitive distortions. Indeed, as said above, small operators face significant market distortions (such as market maturity, on-net offers of incumbents, replication of successful offers due to artificial financial health of incumbents, difference of frequency given to the MNO, locked distribution networks, incumbents' aggressive retention programs). In this context, the Challengers consider that **asymmetrical MTRs are needed as long as market distortions remain**.

- As explained above, because the regulation came late, it has had harmful effects on competition.

The late introduction of MTR regulation enabled the first entrants to finance network roll-out and customer acquisition, but it has resulted in distortions of competition. Indeed, late entrants did not benefit from the same MTR regulatory holidays.

- Moreover, it is now widely acknowledged that high MTRs and low on-net prices from larger operators distort competition.

In fact, on-net tariffs offered by larger operators cannot be replicated by smaller rivals. In many countries, the network effect generates imbalanced interconnection traffic to the benefit of operators with the largest market shares. In other countries where smaller operators were recently forced to introduce competitive "any time any network" (ATAN) offers, traffic balances and thus MTR flows are starting to shift more and more to the operators with the largest market shares.

For instance, **Avea** has suffered a lot from the on-net/off-net pricing differentiation. Before 2001, there were only two operators in the Turkish GSM market. However, when the third operator entered the market, the interconnection rates between the early entrants have suddenly been increased to 20 USD cents and the dominant operator also started to offer its first on-net tariffs.

In that way, MTRs are a heavy burden for Challengers, and, as MTRs are not cost oriented, they generate undue subsidy from smaller operators to larger operators.

- In these circumstances, a temporary asymmetry is necessary to limit competitive distortions.

In fact, asymmetric MTRs would:

- Compensate for historic side effects in favor of larger operators and above all ensure that there is no competitive distortion linked to asymmetry of market share due to late entrance.
- Eliminate side effects due to on-net / off-net price differentiation that benefit to larger operators at the expense of smaller operators.

QUESTION M9:
Do you agree that NRAs should first try to set MTRs at costs?

The Challengers consider that NRAs should not only "try" to set MTRs at costs, but they should really "do it "(i.e. set MTRs at costs).

As said above, Challengers call for **marginal cost** oriented MTRs for first entrants which have already recovered their investment. In order to safeguard the presence of smaller operators on the market (for all the reasons developed above), the decrease of MTRs should be **slower for later entrants** and follow a different glide path.

- It is widely acknowledged that current MTRs are not cost oriented.

With a European average of 10c€/mn, it is clear that we are even far from fully allocated historical costs. Recent research by the ITU shows that Europe is the area with the highest average termination rates in the world.

ARCEP made it clear in its last decision on French MTR. At that occasion, the French Authority audited the operators' accounts and limited the decrease of MTRs because of the lack of European harmonization both on processes and objectives.

- Cost oriented MTR is a necessary condition for fair competition

MTRs above costs can lead to **negative effects**:

- Inefficient networks investments.
- It may also conduct to non efficient traffic routing (e.g. "tromboning") in order to benefit from price distortions.

Cost oriented MTRs would eliminate advantages for larger operators, not justified by a better efficiency, such as the incentive to stimulate on-net traffic at the expense of off-net traffic or the subsidy from fixed network to mobile network.

- Challengers' short term proposal would be to implement immediately cost oriented tariffs for incumbents i.e. to introduce a sharp decrease of their MTRs and to adopt a more progressive approach for small operators.

As already stated, incumbent operators have already recovered the cost of their network through MTRs. Maintaining high MTR for them is therefore contrary to the consumers and competition interest and is resulting in windfall profits.

In the meantime, small operators should be allowed to benefit from higher MTRs during a transitional period in order not to provoke their further weakening, hence a decrease in competition on the retail market. As mentioned above (M7), the appropriate glide path could vary from country to country.

- Challengers' short term proposal would be at least to set MTRs much closer to fully allocated historical costs in a bottom up model and therefore apply the current regulatory framework.

The use of a bottom-up theoretical model enables to identify operators' inefficiencies and is recommended by the European Commission: "Implementation of a bottom-up economic/engineering model helps providing information about inefficient and unnecessary incurred costs, which should be removed"

As the decrease may not be sufficient to resolve the current competition distortion introduced at the retail level, a common approach is necessary at European level, in order to set a joint cost model reflecting marginal costs.

This joint cost model should take into account standardized equipments inputs and common design rules and methodology but also local inputs in order to take into account specificities by country for infrastructure inputs (such as the number of sites, population distribution, overage obligations, demand, infrastructures fixed and variable costs per site) but also specific parameters to each operator (such as volume traffics, technical constraints such as the type of frequencies granted to operators, bargaining power of operators).

Moreover, experience shows that a theoretical approach of cost orientation cannot stand alone: Several NRAs reached divergent outcomes even though they used identical cost model.

The use of bottom up and top down approaches enables the NRA to benefit from their complementary strengths: transparency of bottom up models and reasonability of the assumptions of top-down methods.

The reconciliation between bottom-up cost models and top-down cost models is completed in some countries (In Sweden and Denmark the NRAs use hybrid model) and is suggested by the ERG: “The two methods may be used as complementary tools.”

In order to increase competitive efficiency and maximize benefits for consumers, the Challengers call urgently for significant asymmetric reductions in MTRs with the goal of achieving marginal costs oriented MTRs for the first entrants which have already recovered their investment. In order to safeguard the presence of smaller operators on the market, the decrease of MTRs should be slower for later entrants and follow a different glide path which could vary from country to country.

Appendix 1: factors of frictions on the evolution of market shares

Let us assume that the total market is stable (because it is approaching maturity) and that the churn rate is 23%.

0. Timing of efficient market shares considering ERG model

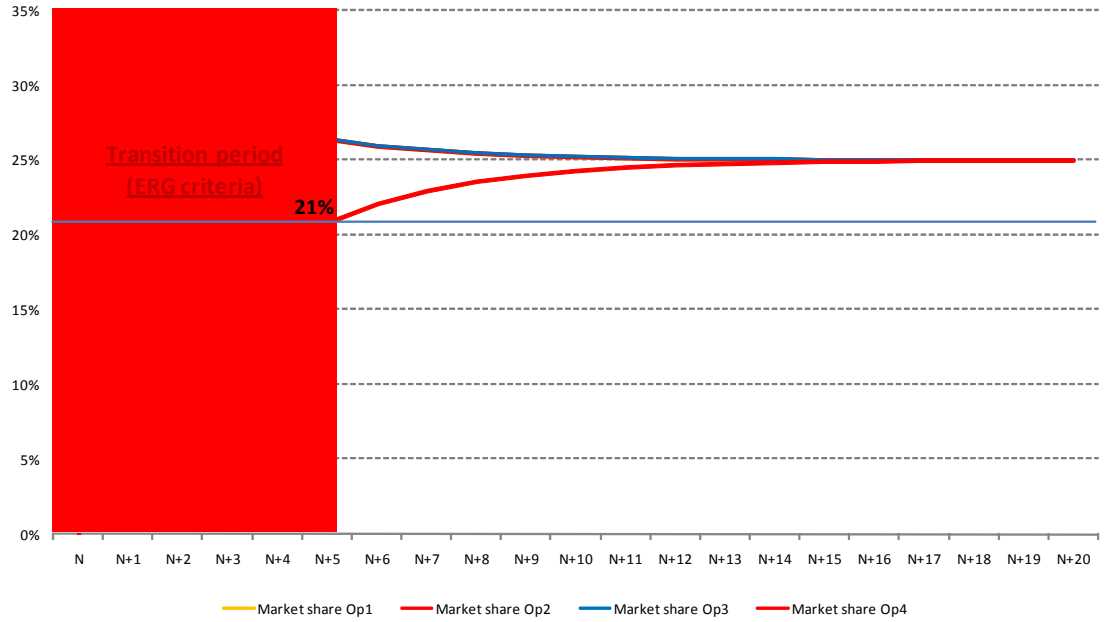
In its public consultation, the ERG computes a model that evaluates the time for a new entrant to become efficient regardless of economies of scale gained. In fact new entrants can be x-efficient from the beginning. The model assumes

- A mature market composed by 3 operators and 1 new entrant;
- A churn rate of 30 %: even if churn rate observed in the 5 last years in main countries in EU is about 23%, this assumption will be kept in the following.
- An acquisition market share for all operators of 25%.

As a result, this simple model shows that

- All operators are in the long term converging towards 25% of market shares: efficient market shares are then the equi-proportionate market share.
- Five years after the entry of the fourth operator, operators have similar market shares (26% for the 3 first operators and 21% for the new entrant) and so similar costs . According to the ERG: "In the previous example, assuming that such market shares lead to similar costs at the end of the 5th year (this is only an assumption), then the transitory period could last 5 years."

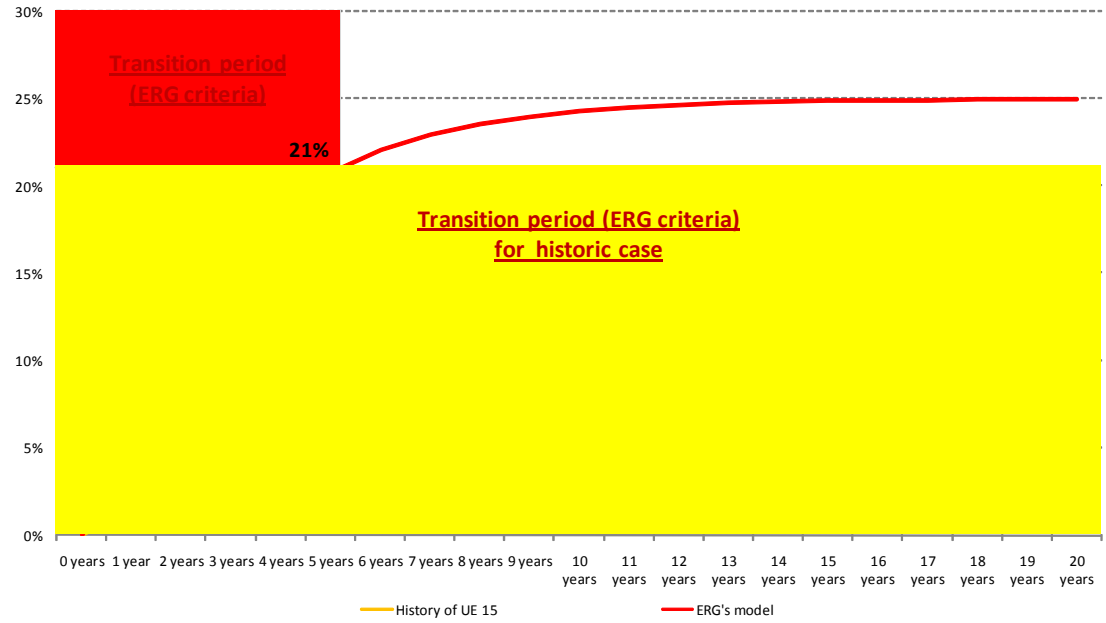
Table 1: Evolution of operators' market shares in ERG model



1. The evidence of market frictions: a comparison between the ERG model and a benchmark of 15 European countries

In order to test ERG's previous model, market data on EU 15 countries have been studied. For all operators of EU 15, grouped by their order of entry, we computed their market shares, X years after their date of entry.

Figure 1: Evolution of EU 15 mobile forth entrants market shares



Source: Tera Consultants

This figure shows that after five years, market shares of the fourth entrants in countries where there are four operators come to about 9% that is well below the market share reached by the last entrant after five years in the ERG's model (21%).

This gap stays unexplained by ERG's model. In other terms, as it cannot be reasonable to assume that the relative bad performance of fourth entrants is due to a global inefficiency, it seems that the dynamic of acquisition of the churners cannot be so simply modeled. Some market imperfections or competitors' behaviors, that constitute "frictions", but not modeled by the ERG, tend to distort and slow down the convergence towards equi-proportional market shares.

2. The necessity for frictions to be taken into account:

Frictions on the evolution of market shares can be divided into two categories:

- Frictions that influence the speed of convergence: these factors apply on the perimeter of customers who churn from one operator to another. The higher this churner's number the faster the convergence.
- Frictions that influence the target of convergence: these factors apply on the acquisition market share. If the acquisition market share is uniform, all operators are converging towards the equi-proportional market share. If not, and for any reason (efficiency or other), operators with better acquisition market share will tend to a market share above the equi-proportional market share, and operators with lower acquisition market share will tend to a market share below the equi-proportional market share.

In general all the phenomena related to corporate image (such as advertising, sales campaign, distribution networks) or related to the market dynamic (such as acquisition offers, sales campaigns in order to replicate competitor's offers) could distort the evolution of market share towards symmetric market shares. Cabral's study (referred to above) shows that, in the presence of network effects created by large operators' on-net/ off-net tariff strategies (and supported by high termination rates), convergence takes much longer and, in fact, may never be achieved. Under certain assumptions, Cabral finds equilibrium with highly asymmetric market shares.

In order to represent a more realistic mobile market dynamic, we propose to add to ERG's model the following "frictions":

- Frictions due to the preference for the churners to stay in the same network: this friction is modelled by the split of churn rate into internal and external churn rate. This friction belongs to the first described category and influences the speed of convergence
- Frictions due to the effect of the size of the distribution networks. This friction belongs to the second described category and influences the target of convergence.

2.1 A distinction between internal and external churn:

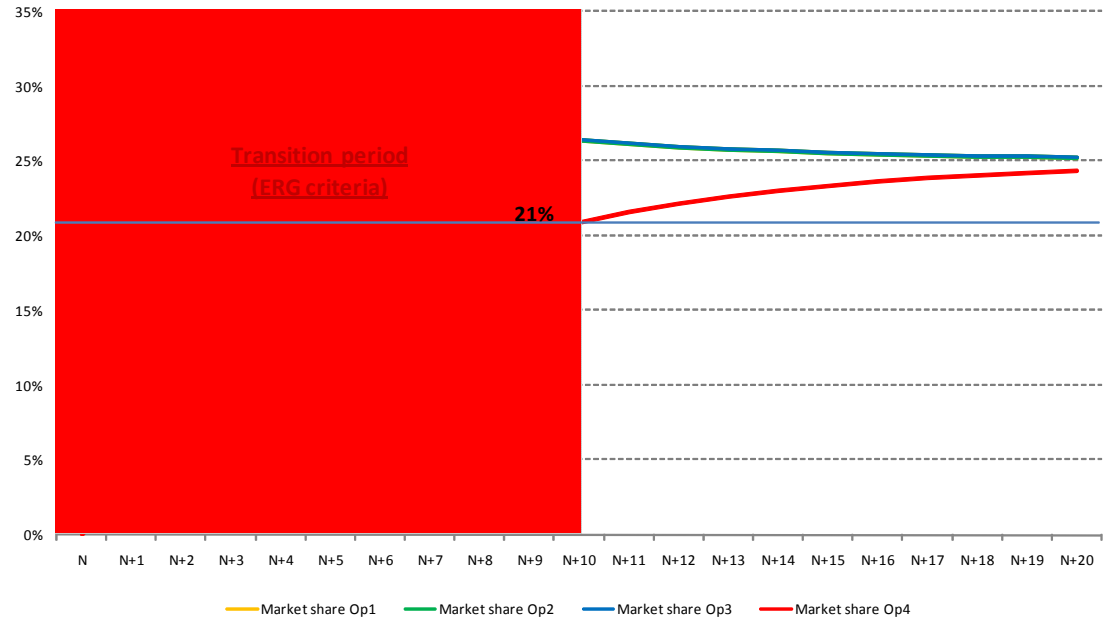
We consider a mobile market composed by 4 operators, 3 incumbents and 1 new entrant, with

- For year N (date of entry of the last operator) operators 1; 2 and 3 having 33% market share and operator 4 has 0%.
- A churn rate of 30 %.
- In order to take into account that a part of the churners wish for a renewal of their mobile phone and do have a preference for their own operator (they have a good experience of their operator, have already built a network of contacts, have a relative good knowledge of services provided…) the churn rate is broken down as follows:
    - An internal churn rate of 45%: these customers subscribe a new offer provided by their own operator and can be considered as a captive group (this internal churn rate is consistent with the French case).
    - And an external churn rate of 55%: these customers are churning for another operator.
- Each operator acquires ¼ = 25% of customers who churn to another operator (external churn rate).

As a result, the following figure shows that:

- The market shares modeled in the revised model are below those modeled by the ERG. This means that the convergence towards equi-proportionate market shares is slower than in the original ERG's model.
- After five years, the fourth entrant only holds a market share of 15%, which is 6 points less than in the original ERG's model (21%).
- In this first revised model, the fourth entrant reaches 21% after 10 years.

Figure 2: Evolution of market shares in ERG revised model with internal/external churn rate

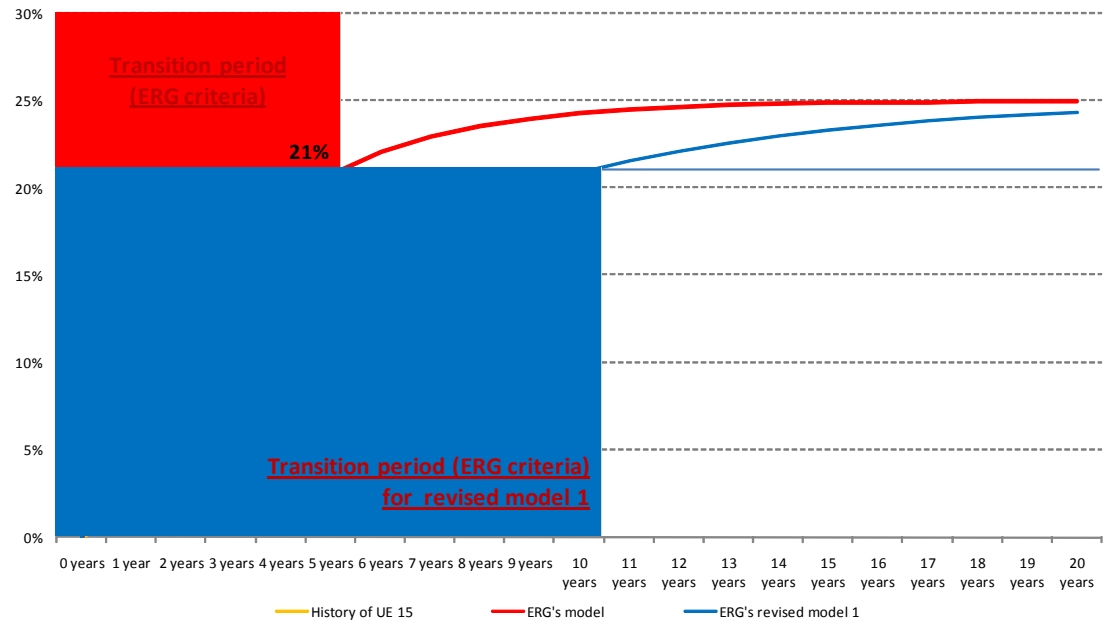


Source: Tera Consultants

Moreover, the comparison with historic evolution of fourth entrants in EU 15 shows that:

- Even though market shares modeled in the revised model are below those modeled by the ERG market shares in this first revised model are still above historic ones.
- The evolution of historic market shares is still slower than for the model including the distinction between internal/external churn.

Figure 3: Comparison of market shares between ERG's model / history / ERG's revised model 1



Source: Tera Consultants

This brings into light probabilities of other factors of friction.

2.2 Effects of network distribution sizes:

Let us assume in addition that customers who are churning to other operators (external churn rate) are broken down as follows:

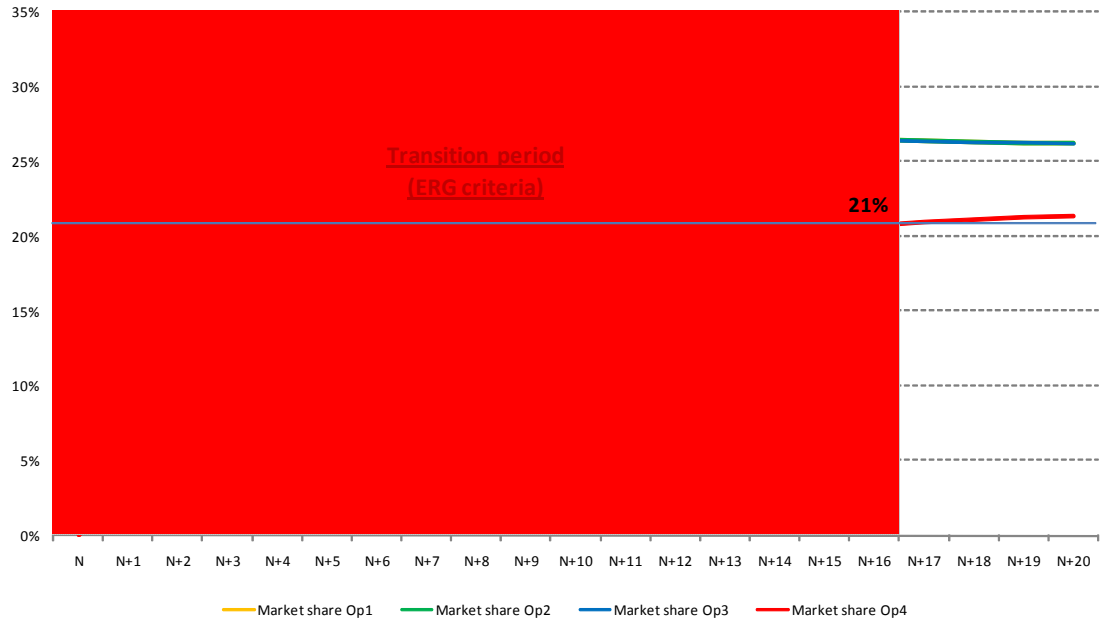
- 50% of the acquisitions are done in a multi-operator or home shopping and 50% in a mono-operator shop, which is consistent with the French case.
- Customers who sign a new contract in a multi-operator or home shopping where each operator have 25% of customers
- Customers who sign a new contract in a mono-operator shop where the operator has 100% of customers. The number of mono-operator shops influences then the number of new contracts.
- Let us finally assume that if the three first operators had each 100 mono-operator shops, operator 4 would have 70 mono-operator shops (30% less than the incumbents), which is consistent with the relative allocation of distribution networks in France: until the recent acquisition of Photo Station and Photo Service stores by orange, the decomposition of the mono operator stores in france was as follows.
    - Orange: 878
    - SFR: 735
    - Bouygues Telecom: 547

Granted that SFR and Orange entered the market at the same time, the average number of mono operator store between the 2 MNOs is considered (807 store). As a result, Bouygues Telecom, with only 547 stores has 30 % less than the other MNOs.

As a result:

- After five years, the fourth entrant holds a market share of 13% instead of 21% in the original ERG's model. In the long term, it converges towards a market share of 22% (and the incumbents towards 26%), instead of 25% for the original ERG's model.
- In this second revised model, the fourth entrant reaches 21% after 16 years instead of 5 years in the original model.

Table 1: New entrant's market shares in ERG revised model with internal/external churn rate and distribution networks effect

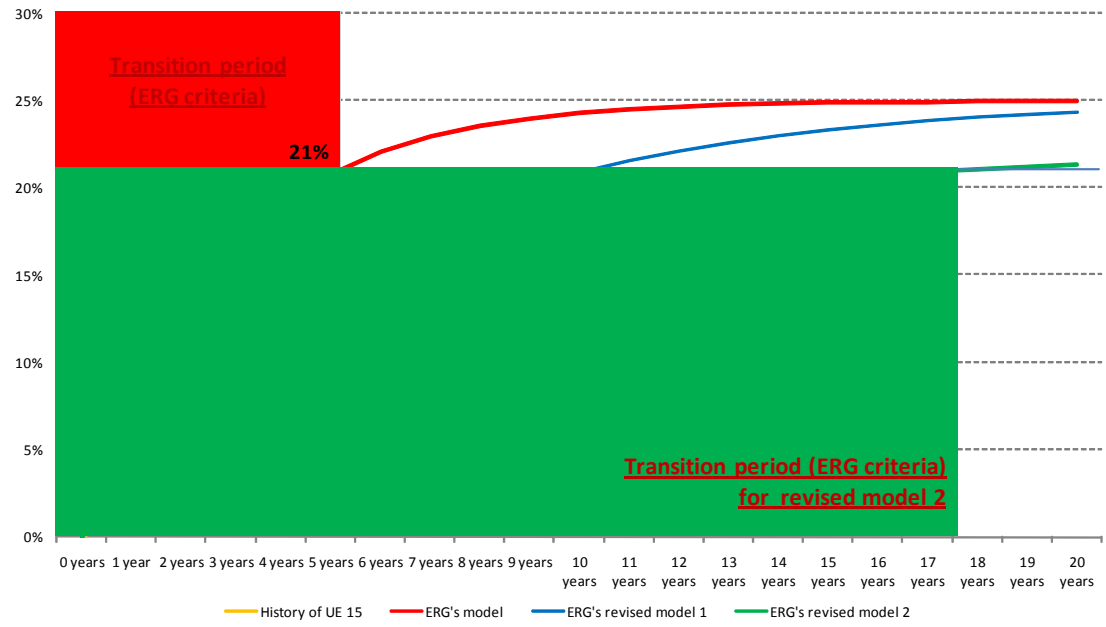


Source: Tera Consultants

The comparison with historic evolution of fourth entrants in EU 15 shows that:

- Even though market shares modelled in the second revised model are below those modeled by the ERG, market shares in the revised model are still above historic ones.
- The evolution of historic market shares is still slower than for the model that includes the distinction between internal/external churn and the effect of distribution networks.

Figure 4: Comparison of market shares between ERG's model / history / ERG's revised model 1 / ERG's revised model 2



Source: Tera Consultants

2.3 Other sources of friction not computed in the model:

2.3.1 Neutrality of new entrants' sales investments on market's equilibrium

Another phenomenon that could also be modelled is the market inertia. This inertia results from the maturity of the market as well as from financial wealth of incumbents. Since incumbents have accumulated huge cash flows since the 90's they are today with "deep pocket" and will always be able to invest at least as much as new entrants. Consequently sales differentiations, in advert for example, in order to catch up their lateness mostly have effects during very limited period of time.

2.3.2 Possibility for incumbents to replicate new entrants offers

Indeed incumbent will be better able to replicate sales innovations or to support promotional offers. Therefore any successful offer from new entrants could only have temporary effects on its market shares. In order to illustrate this, we can quote the case of the NEO offer from Bouygues Telecom, which even though it was very popular and successful, conducts to an increase of only 0.4% of market share.

Appendix 2: on-net and off-net retail offers combined with symmetric MTRs give an advantage to larger operators

When selecting a MNO in a market characterized by on-net/off-net price differentiation, a consumer will tend to subscribe to the one for which the majority of its main correspondents are subscribers, statistically the largest operator (Kim & Kwon, 2003). Also, a large operator's on-net/off-net differentiation usually locks in subscribers: with high off-net calls, subscribers may be more reluctant to move from their operator to another. The French competition authority rightly synthesised in 2002 the benefits of on-net/off-net differentiation for large MNOs:

"Price differentiation can influence customers' choice in case of first purchase or in case of renewal, to the extent that they will be nowadays able to take into account the networks to which belong their main correspondents. These effects may reduce the interoperability between networks and therefore be in favour of large operators, because customers value the ability to call and to be called by the largest possible number of correspondents."

Not only on-net/off-net price differentiation enables large MNOs to enhance their market share, but, in presence of equal MTR, this phenomenon is reinforced. Indeed, the introduction of on-net/off-net price differentiation offers by large operators generates an increase of on-net calls and a decrease of off-net calls (all other things being equal).

As a consequence, traffic is no more balanced between incoming calls and off-net calls for both small and large operators. Small operators have more off-net calls than incoming calls and, in presence of symmetric MTR; they face "illegitimate" losses. The addition of on-net/off-net price differentiation offers, market share differences and symmetric MTR in a mobile market generates undue profits for large operators and undue losses for small operators.

The only way for small operators to prevent these losses is to introduce also on-net/off-net price differentiation. But, all things being equal, the difference between on-net and off-net prices must be higher for small operators than for large operators so that customers do not prefer systematically the larger operator which makes a large operator's offer not replicable.

Appendix 3: on-net and off-net retail offers combined with MTRs above costs give an advantage to larger operators

Price differentiation of dominant operators appears as a threat for operators with significant lower market shares as on-net retail offers allow to freeze and to reinforce market shares of the largest operators. They limit indeed the possibility for smaller operators to replicate these on-net offers.

As MTRs are above costs, the price for on-net calls can be below the price for off-net calls of which costs are equal to the sum of the cost of the origination call and the MTR. This effect can create an incentive for the mobile operator to enhance its on-net traffic at the expense of off-net traffic.

In the retail market, this can be done by offering cheaper or unlimited call toward a few or all numbers of the own network.

Price differentiation between on-net/off-net calls benefit mainly to larger mobile operators at the expense of smaller operators, as the French competition authority rightly summarized it: “Price differentiation can influence customers’ choice in case of first purchase or in case of renewal, to the extent that they will be nowadays able to take into account the networks to which belong their main correspondents. These effects may reduce the interoperability between networks and therefore be in favour of large operators, because customers value the ability to call and to be called by the largest possible number of correspondents.”

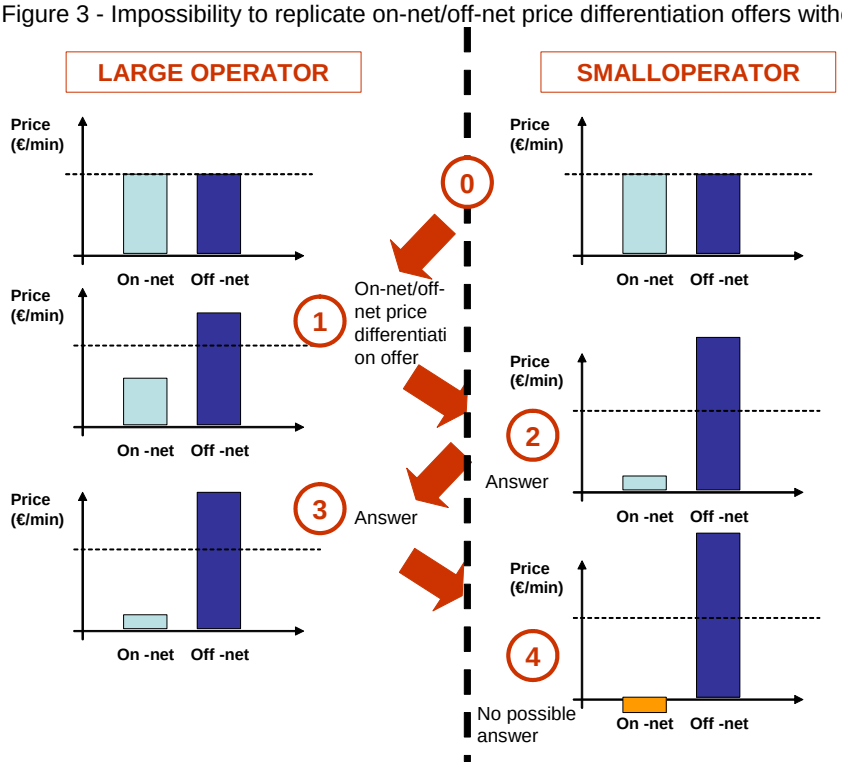
It might be objected that on-net/off-net differentiation could create a pro-competitive dynamic by encouraging each operator to increase its market share to take advantage of network effects. This argument can be relevant when initial market shares of operators are balanced. Each operator benefits from the same network effects and tries to take an advantage over its competitors. However, when market shares are asymmetric (as is the case for most European markets), network effects creates on the contrary a disadvantage for smaller operators, and locks them into a vicious circle: the lower their market shares, the less attractive their offers, and therefore the lower their market shares, and so on.

However, due to on-net/off-net differentiation, traffic is no more balanced between incoming calls and outgoing off-net calls. Smaller operators have more off-net calls than incoming calls and, due to MTRs above costs, face “illegitimate” losses, whatever their respective efficiencies. Conversely larger operators that have more incoming than off-net calls will get profits from interconnection and will benefit from undue profits. This leads to a transfer through interconnection payments from the smaller to the larger operators.

The only possibility for smaller operators to prevent these losses is to introduce also on-net/off-net price differentiation[7]. But, all things being equal, the difference between on-net prices and off-net prices must be higher for smaller operators than for larger operators so that customers do not prefer systematically the larger operator. But in the absence of significant network effects, a small operator does not have the capacity to pursue a price differentiation between on-net and off-net calls. And the absence of differentiation for smaller operators is in fine traduced by more outgoing off-net calls and less ingoing off-net calls, and therefore more termination charges. This makes the replicability of larger operator’s offers sometimes impossible if the on-net price of larger operators is too low.

[7] Another option for smaller operators could be to reduce the price of off-net calls. However, this would not be possible due to the high MTRs of incumbents. This is the reason why on-net tariffs of incumbents should not be lower than their termination rate

Figure 3 - Impossibility to replicate on-net/off-net price differentiation offers without having illegitimate losses



Thus, smaller operators can either try to have balanced incoming and off-net traffic which is not possible due to the difficulty for smaller operators to replicate on-net/off-net price differentiation of larger operators or accept to have unbalanced traffic which implies illegitimate losses which reduces the level of competition on the market.